

QMONITOR

ONTARIO HEALTH QUALITY COUNCIL

2007 REPORT

ON
ONTARIO'S
HEALTH
SYSTEM



Q Monitor | ONTARIO HEALTH QUALITY COUNCIL

The quality of our health system is the responsibility of every Ontarian — we hope this report will help you understand the publicly funded health system better, and give you the information you need to keep up pressure for improvement.

After all, it's **your health and your health system.**

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INTRODUCTION AND REPORT SUMMARY



Ontarians share a common vision of a high-performing health system. We want a system that is accessible, effective, safe, patient-centred, equitable, efficient, appropriately resourced, integrated and focused on population health. We call these features the *nine attributes of a high-performing health system*.

We use these nine attributes to help us assess and report on the quality of the publicly funded health-care system. We are the Ontario Health Quality Council, an independent agency created under the *Commitment to the Future of Medicare Act*. Our mandate is to tell Ontarians about the state of our publicly funded health system, including whether people can get the health services they need when they need them, whether we have the right mix of workers in the system and enough of them, the health of the Ontario population overall, and whether the health system is getting the results it's aiming for. We also support efforts to keep improving the quality of Ontario's health system. This is our second yearly report.

The goal of our reports is to give you objective information on what's working and what needs improvement in our health system. The quality of our health system is the responsibility of every Ontarian — we hope this report will help you understand the publicly funded health system better, and give you the information you need to keep up pressure for improvement. After all, it's your health and your health system.

To prepare our report, we engaged respected researchers to find objective evidence, we toured the province to talk to people about their expectations for and experiences with our health system, and we consulted with experts to get their opinions on what we learned.

REPORT SUMMARY

This year, our assessment of the nine attributes across the province revealed many positive signs that we can all be proud of. But our report also reveals many gaps. Managing the growing burden of chronic illness is a particularly important challenge. We also need to continually improve the quality of the system. And to do both we need more and better data.

It's a point we made strongly last year and it's every bit as crucial this year: we cannot run a high-performing health system without the best data — and we are a long way from having that. To be effective we need standardized, consistent province-wide data about who's getting care, what kind, where, and what its outcomes are. Better data is essential to monitor and report to the public on the health system in Ontario and track specific regions, groups and types of illness. Without good data we cannot manage quality improvement across the health system.

Using the data we have, we've prepared a detailed report on the state of our health system. In this summary we'll talk a bit about how we're doing on each of the nine attributes, then explore some issues in a little more depth.

ACCESSIBLE

People should be able to get the right care at the right time in the right setting by the right health-care provider.

Ontario announced its Wait Time Strategy in late 2004 and since then has reduced waits for all the specialty areas it tackled — heart and cancer treatment, MRI and CT scans, hip and knee replacements and cataract removal. There are plans to expand it to other types of surgery so those waits can be measured and improved as well.



Fewer patients in rural and remote parts of Ontario are travelling for medical appointments because of telemedicine, which uses videoconferencing and other technology to allow patients to have appointments with doctors hundreds of kilometres away. There are 359 telemedicine centres in 190 Ontario communities and more are to be added in the next year.

Since 2003, an additional half million people said they have a regular doctor, which means we are keeping pace with population growth. This is good news, but there remains a distance to go before adequate access to a family physician is available to all Ontarians who want one.

However, better access requires more health-care professionals better distributed throughout the province and effective use of their skills, for example, through multidisciplinary care teams. Access for patients in certain regions and groups (such as Aboriginal Ontarians and new immigrants) requires attention.

EFFECTIVE

People should receive care that works and is based on the best available scientific information.

We're seeing better results for patients during the critical first month after a heart attack: 30-day survival rates have grown from 85.5 percent to 88.9 percent in the last six years. And the implementation of the Ontario Stroke System means that more eligible patients at designated stroke centres are receiving life-saving medications in the right timeframe.

When caregivers use evidence-based guidelines, patients do better — Cancer Care Ontario and the Cardiac Care Network show that. But we don't use them enough and some people with chronic illnesses in particular aren't getting the best care possible.

Better strategies for chronically ill patients who have been hospitalized would send them home when they're ready with a care plan that shows them how to manage their condition, improve as much as possible and stay out of hospital in the future.

SAFE

People should not be harmed by an accident or mistakes when they receive care.

The number of people in Ontario who fall and break a hip while in hospital or a long-term care centre is below the national average, but it should be even lower. Only six percent of chronic care patients get bedsores, but many bedsores can be prevented.

The Ministry of Health has developed the Drug Profile System, an electronic system for emergency department staff to monitor prescriptions and potential drug reactions. It's also established an expert panel on surgical quality and safety as part of the Wait Time Strategy.

Safer health care requires less focus on blaming caregivers for what goes wrong and more on learning what flaws in the system allowed the adverse event to happen and changing systems to prevent them in future. This system-based approach is the key to all aspects of continuous quality improvement.

PATIENT-CENTRED

Health-care providers should offer services in a way that is sensitive to an individual's needs and preferences.

Nine out of 10 people in Ontario report they are satisfied with the care they receive from their doctor during regular check ups and when they're sick. Ontarians with chronic illness are equally satisfied, which is good news.

Initiatives to increase patient-centred care are being adopted by Cancer Care Ontario. The Princess Margaret Hospital provides patients with an interactive cancer treatment series that includes a patient-education intranet, a virtual tour of the hospital in seven languages, a guide for families and friends and a library. Patients can access their blood test results online along with information about what the results mean.

We would learn more about patient-centred care if we could measure what patients think about specific parts of it, such as the quality of communication with their care providers.

EQUITABLE

People should get the same quality of care regardless of who they are and where they live.

The percentage of Ontarians (nine in 10) who report they have a regular doctor is very similar for Canadian-born Ontarians and those who immigrated to Canada over five years ago, which is encouraging. However, for newer immigrants (in Canada less than five years) the rate is much lower: only 73 percent.

Aboriginal Ontarians face difficulties getting care, and receiving it in a co-ordinated and culturally sensitive manner. The Aboriginal Healing and Wellness Strategy and growing numbers of Aboriginal administrators and providers are strengthening the province's ability to provide the best possible care to Aboriginal Ontarians, but we still have a long ways to go.

The Ministry of Health has included equity as a theme in its strategic plan, and many local health integration networks are focused on diversity. Increasing opportunities for foreign-trained health professionals, recruiting Aboriginal students for health care training and training programs in northern communities should improve access to culturally competent care and meet the needs of Ontario's diverse population.





AFFICIENT

The health system should continually look for ways to reduce waste, including waste of supplies, equipment, time, ideas and information.

The province's Wait Time Strategy has demonstrated that review, measurement and standardization of administrative and logistical processes can make surgery more efficient and reduce waits.

Organizations around the province are leading the way on improving efficiency: Grey Bruce Health Services has improved co-ordination with the community services that care for patients when they leave hospital and hospital stays are an average of two days shorter. Sault Ste. Marie Group Health has cut heart-failure patients' return to hospital by 43 percent because family doctors care for their patients in hospital then work closely with home care staff after they're sent home.

However, overall there has been little change in the number of hospital beds occupied by people ready for lower levels of care or in unnecessary visits to emergency departments. A more efficient system would move people smoothly out of hospital into the level of care that's right for them.

APPROPRIATELY RESOURCED

The health system should have enough qualified providers, funding, information, equipment, supplies and facilities to look after people's health needs.

Ensuring the right mix of health-care professionals and organization of care around the province is getting more attention. The supply of primary care practitioners is growing, and there are more health-care students and opportunities for foreign-trained professionals. HealthForceOntario is overseeing efforts to build the supply of human resources in health, but we need more information to adapt to changing roles for caregivers and new ways of giving care.

There is a move to think of spending on health care in terms of the results of care and the overall health of the population. But we need better information to measure whether we're getting a good return on health care investment in Ontario.

We can't achieve a high-performing health system without excellent data, but most of Ontario's hospitals are far away from fully implementing comprehensive electronic health records.

INTEGRATED

All parts of the health system should be organized, connected and work with one another to provide high-quality care.

When preventive and primary care are well-integrated, most hospital stays for chronic conditions should be avoided. The rates of hospitalization for asthma, acute bronchitis, pneumonia and heart disease are decreasing in Ontario, and they are lower than the Canadian average.

The new local health integration networks are responsible for planning, integrating and funding health services in 14 areas of the province, including implementation of new integrated health-service plans. This work continues.

To measure and assess integration of the health-care system we need an electronic health record to assist patients in moving through the system.

FOCUSED ON POPULATION HEALTH

The health system should work to prevent sickness and improve the health of the people of Ontario.

There have been some notable successes in changing unhealthy behaviour. Smoking rates are much lower than a generation ago — the number of teenagers who smoke every day has dropped by half in the last five years, to only six percent. Still, half the adults in Ontario are inactive and one in seven is obese. The obesity rate has remained steady for the past five years.

Screening programs help detect cancer early, when it's easiest to treat. Cancer Care Ontario has recommendations and targets to screen for breast, cervical and colon cancer, but we're a long way from meeting its targets. Just 68 percent of the target population for breast cancer screening, 62 percent of the target population for cervical cancer and 10 percent of the colon cancer target group are having the recommended tests.

Ontario's Ministry of Health and Long-Term Care recently announced a program to increase participation in colon cancer screening. The Ministry of Health Promotion is developing a plan to promote healthy public policy by encouraging all parts of the provincial government to co-ordinate policies and programs that affect the health and well-being of Ontarians.

The chronic disease challenge

Looking hard at how Ontario measures up on the nine attributes of a high-performing health system shows us what is working and what needs improvement. The way we handle chronic disease is at the top of the needs improvement list. Although acute problems — such as sudden, severe illnesses or the devastating needs of accident victims — tend to be what we think of first when we talk about health care, chronic diseases, the illnesses people live with for years, such as heart disease and diabetes are the biggest challenge in health care. At least 60 percent of Ontario's health-care costs are due to chronic diseases.

Ontario needs a co-ordinated, system-wide strategy to reduce and better manage chronic disease. A long-term strategy to redesign how we care for chronic diseases — including supporting patients as they learn to care for themselves — would improve the health of millions of Ontarians and reduce costs in the health system.

- The number of people living with chronic disease, such as arthritis, diabetes, and heart failure is increasing as the population ages.
- About one in three Ontarians of all ages have one or more chronic diseases. Of those over the age of 65, almost four out of five have one chronic disease; of these individuals, 70 percent suffer from two or more.



- Low-income Canadians are 50 percent more likely than high-income people to report having a chronic disease and are three times as likely to report having two or more chronic conditions.
- Aboriginal Ontarians, who as a group generally have less income, education and employment and often live in a poor physical environment, have higher rates of most chronic illnesses. They are three to five times more likely to have type 2 diabetes.



- A healthy lifestyle (consisting of a clean environment, a nutritious diet, physical fitness, supportive family and social relationships, and meaningful, safe work) could prevent over 80 percent of cases of coronary heart disease and type 2 diabetes, and over 85 percent of cases of lung cancer and chronic obstructive lung disease such as emphysema.

There is good evidence about how to improve care for chronic disease, and some excellent treatment in the province. But efforts to prevent and manage chronic disease are inconsistent and unco-ordinated. Most patients with chronic conditions aren't encouraged to manage their own care, or given written management plans and the lack of electronic records means care is not organized and managed in ways that give the best results.

There are some positive signs that care for chronic disease will improve. The Ministry of Health and Long-Term Care's strategic plan is to include managing chronic disease and all 14 of Ontario's local health integration networks have identified chronic disease as a priority in their service plans. In addition, Ontario's move to interdisciplinary models of primary health care should mean chronically ill patients receive broad, well-integrated care from their primary providers.

We're concerned, however, that there are too many different people working on chronic disease prevention and management without co-ordinating their efforts. There's a possibility it won't be clear who is developing and delivering effective chronic disease care — with the risk that some parts will fall between the cracks. A chronic disease strategy should be implemented using a proven, successful model.

Continuous quality improvement

Chronic illness shows us that the health system is not performing as well as we would like. To make the system better we have to develop and implement quality improvement strategies. To do that we must develop a system that has the appropriate infrastructure, leadership, engagement with providers, public reporting and robust information to measure and rate care. We've found:

- Ontarians want accountability throughout their health system. The Ontario Health Quality Council reports on quality at the provincial level and where possible, locally. It is expected that local health integration networks will also begin reporting to the public on quality in the areas they cover.
- Independent third parties should assess quality for each local health-care organization and publicly report the results. Measuring the care given in one institution against proven best practices can show areas that are underperforming, so plans for improvement can be developed.

- The Health Council of Canada agrees: it advises that all health-care organizations should participate in regular accreditation processes and publicly report on the results to ensure local accountability.
- Lack of information is a major barrier to accountability and quality improvement. If we can't measure the quality of the care we give, we can't manage it effectively and we can't make solid plans to improve it.
- Electronic health records are essential, whether to co-ordinate care for a single patient or to plan the entire system. There is a provincial strategy for e-health but it's not yet clear how it will function. Work and investments so far are small.

Striving for the best quality care is in everyone's interest, but we're still falling short on a system-wide strategy for continuous quality improvement. Where we are getting results, we're following the guidelines for improving health care by strengthening leadership, changing the organizational culture, putting the right strategies and policies in place and making sure we have

the structure and resources to gather and measure data. We're emphasizing communication, training and getting providers involved. We're working with individuals to change their practices. This approach has been successful in the Wait Time Strategy, which could become a model for quality improvement across the system.

But while the Wait Time Strategy demonstrates that it is possible to make changes to improve quality, a system-wide quality-improvement strategy needs comprehensive, standardized data collected across the system. Better and more complete data would allow us to plan improvements, ensure appropriate resources are in place to provide the best health care, and monitor underperforming regions or populations that aren't doing as well as they should.

Electronic health records are essential for this. They would tell us who is getting care, what kind, and how it's working. That information is the key to effectively assessing the health system and improving it for Ontarians.





2



TOWARD A HIGH-PERFORMING HEALTH SYSTEM FOR ONTARIO



We started our work by asking experts what attributes, or characteristics, a high-performing health system should have. Then we held town-hall meetings and focus groups across the province to find out what people in Ontario expect from their health system, and how they would define the features of a

high-performance system. After that, we took the characteristics the public meetings had endorsed, and tested their definitions to ensure they were clear and relevant. That process produced these definitions of nine attributes of a high-performing health system:

ACCESSIBLE

People should be able to get the right care at the right time in the right setting by the right health-care provider.

For example, when a special test is needed, you should receive it when needed and without causing you extra strain and upset. If you have a chronic illness such as diabetes or asthma, you should be able to find help to manage your disease and avoid more serious problems.

EFFECTIVE

People should receive care that works and is based on the best available scientific information.

For example, your doctor (or health-care provider) should know what the proven treatments are for your particular needs including best ways of co-ordinating care, preventing disease or using technology.

SAFE

People should not be harmed by an accident or mistakes when they receive care.

For example, steps should be taken so that elderly people are less likely to fall in nursing homes. There should be systems in place so you are not given the wrong drug, or the wrong dose of a drug.

PATIENT-CENTRED

Health-care providers should offer services in a way that is sensitive to an individual's needs and preferences.

For example, you should receive care that respects your dignity and privacy. You should be able to find care that respects your religious, cultural and language needs and your life's circumstances.

EQUITABLE

People should get the same quality of care regardless of who they are and where they live.

For example, if you don't speak English or French it can be hard to find out about the health services you need and to get to those services. The same can be true for people who are poor or less educated, or for those who live in small or far-off communities. Extra help is sometimes needed to make sure everyone gets the care they need.

EFFICIENT

The health system should continually look for ways to reduce waste, including waste of supplies, equipment, time, ideas and information.

For example, to avoid the need to repeat tests or wait for reports to be sent from one doctor to another, your health information should be available to all of your doctors through a secure computer system.

APPROPRIATELY RESOURCED

The health system should have enough qualified providers, funding, information, equipment, supplies and facilities to look after people's health needs.

For example, as people age they develop more health problems. This means there will be more need for specialized machines, doctors, nurses and others to provide good care. A high-quality health system will plan and prepare for this.

INTEGRATED

All parts of the health system should be organized, connected and work with one another to provide high-quality care.

For example, if you need major surgery, your care should be managed so that you move smoothly from hospital to rehabilitation and into the care you need after you go home.

FOCUSED ON POPULATION HEALTH

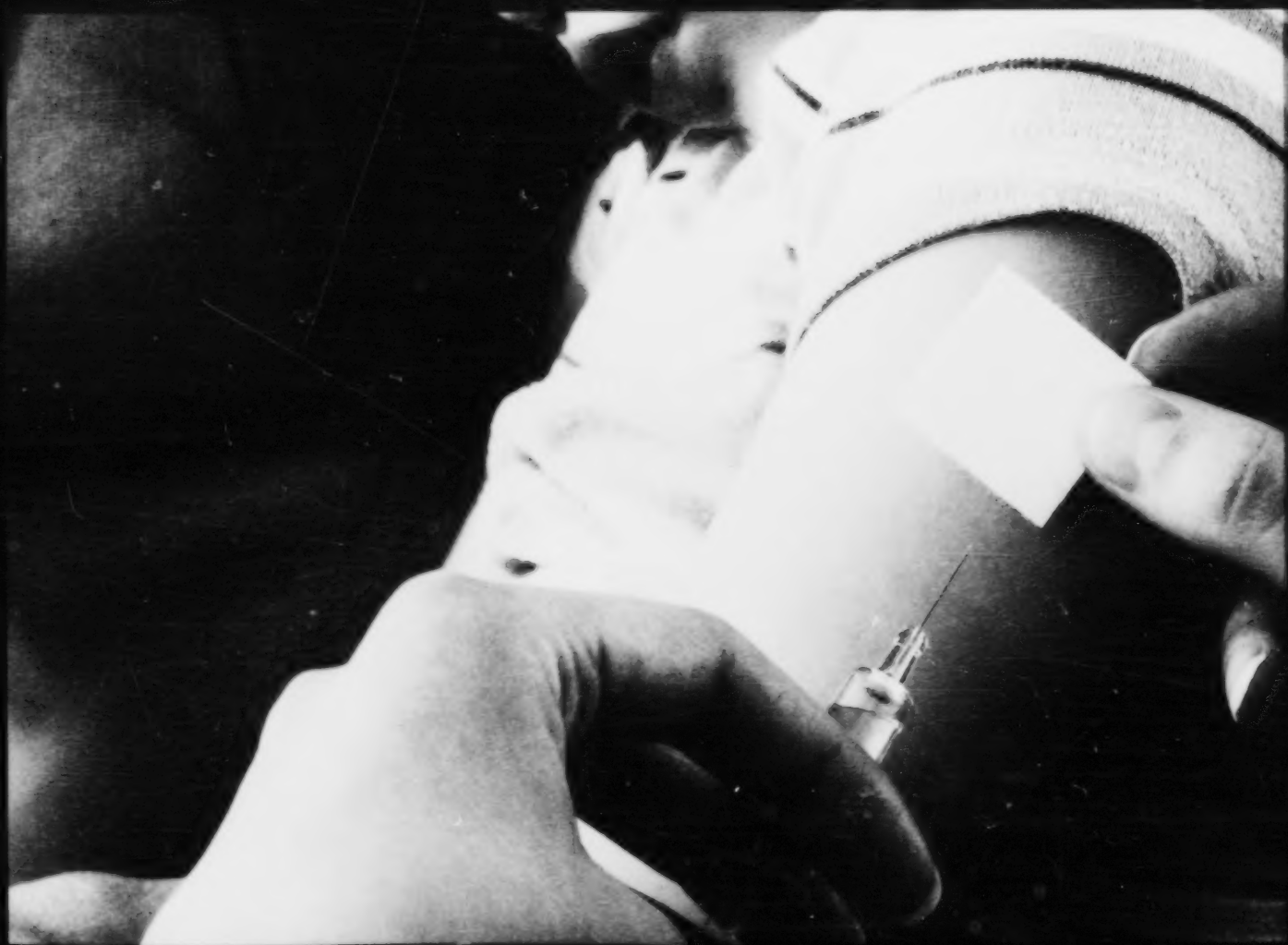
The health system should work to prevent sickness and improve the health of the people of Ontario.

We think these attributes are the most relevant and understandable framework to guide our work reporting to the public on health in Ontario, and expect other organizations – including the Ministry of Health and Long-Term Care, the local health integration networks and other health-services providers – to use it whenever they issue reports to Ontarians.





3



HOW IS ONTARIO'S PUBLICLY FUNDED HEALTH SYSTEM PERFORMING?



3.1 ACCESSIBLE

"People should be able to get the right care at the right time in the right setting by the right health-care provider."

To measure Ontario's performance in ensuring care is accessible, we looked at how we're doing providing access to three important types of care the province has been working on. They are:

- Access to a family doctor;
- Access to the five services in the Wait Time Strategy; and
- Use of telemedicine.

Improving access to health-care services has been a priority in Ontario and across Canada and no wonder — as we travelled the province, the top concern we heard from Ontarians was whether they would be able to get the care they need when they need it. For many, access means having a regular family doctor who knows

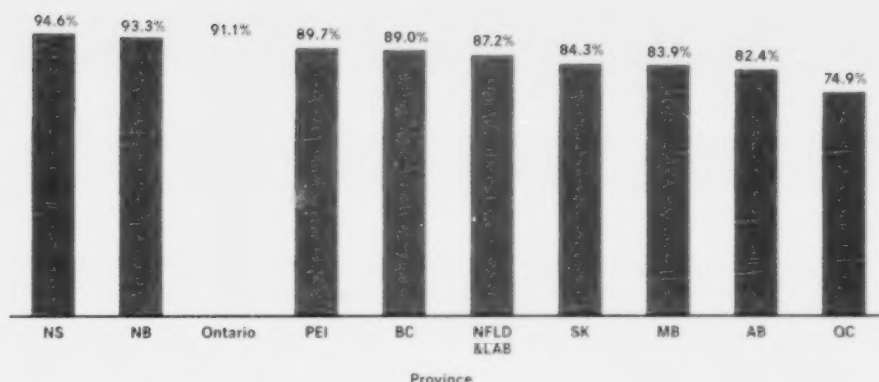
your medical history and can work with you to help co-ordinate the care you need. A family doctor is particularly important for people with chronic conditions that require ongoing care, possibly from a variety of sources. A regular family doctor is part of good primary care because he or she tries to prevent illness and cares for the sick.¹ The Ontario government is working to make it easier to find a regular family doctor. To encourage changes in how family doctors are organized the government is offering financial incentives to doctors to work with nurses, nurse practitioners and other health-care professionals in family health teams. The ministry's target is to have 150 family health teams in place by early 2008. By November 2006, there were 76 open with another 74 approved. So far, over 1.4 million Ontario patients are enrolled with these teams.² We understand these results are being evaluated to support the next phases of implementation.

Access to care is also about being able to get speciality services — from complex surgical and diagnostic procedures to consultations with medical specialists — in a timely and efficient way. Public opinion surveys in

Many hands may make light work — they also get a lot more of it done. In North Bay, the Blue Sky Family Health Team, with 16 physicians, a dietician, a social worker, a registered nurse and a nurse practitioner, is set to open 363 days a year. "Over the last three years, working together in a team has made it possible for our practice to take on 3,000 more patients without adding any additional providers," says Dr. Wendy Graham, the team's lead physician. The team will also provide chronic disease management to 22,800 patients with diabetes, obesity, high cholesterol or lung disease.

Statfield B. (1994) Is primary care essential? *Lancet*, 344: 1129-33.
Primary Care Division, Ministry of Health and Long-Term Care, January 3, 2007.

Proportion of Canadian Population (Age 12+) by Province Reporting a Regular Medical Doctor, 2005



Source: Health Indicators Report, Statistics Canada, 2005. Data derived from the Canadian Community Health Survey (cycle 3.1, 2005) (Statistics Canada).

Ontario and across Canada consistently say shorter waits for health services should be a top priority for government. A recent Ipsos-Reid/CMA poll found that Canadians rank guaranteed wait times as the highest priority of the federal government.¹ In 2003, the First Ministers' Accord on Health Care Renewal promised to reduce waits for specialty services in five priority areas: cancer care, cardiac care, cataract surgery, replacement of hips and knees and diagnostic imaging (MRI scans and CTs). Ontario announced its Wait Time Strategy in late 2004.

Some access problems are geographic — people in remote areas often have trouble getting the care they need. Telemedicine, which uses videoconferencing and other technology to allow patients to have appointments with doctors hundreds of kilometres away, saves a lot of patients a lot of travel. There are 359 telemedicine sites in over 190 communities in Ontario, many of them in remote and rural areas and all run by the Ontario Telemedicine Network.² Aboriginal, under-served and francophone communities benefit greatly from telemedicine, which also allows health professionals to take courses or learn new skills over long distance.

3.1.1 Access to a family doctor

ACCESS ACROSS REGIONS

There is concern across the country about access to family doctors. In 2005, a national survey found 91.1 percent of Ontarians reported they have a regular doctor, higher than many provinces but lower than Nova Scotia and New Brunswick.

In 2006, Ontario started the Primary Care Access Survey, which will track information on access to care and be useful in measuring whether we're improving.

The 2006 round of the survey showed 91.6 percent of Ontarians 18 years and older report having a regular family doctor, but there is some variation in access depending where you live — ranging from 88.5 percent in Ottawa and Eastern Ontario (the area of the Champlain Local Health Integration Network) to 94.9 percent in the Hamilton Niagara Haldimand Brant network. We don't have enough information to know if some communities within each region have bigger problems with the supply of doctors than others. Since 2003, an additional half million people said they have a regular doctor,³ which means we are keeping pace with population growth. This is good news, but there remains a distance to go before adequate access to a family physician is available to all Ontarians who want one.

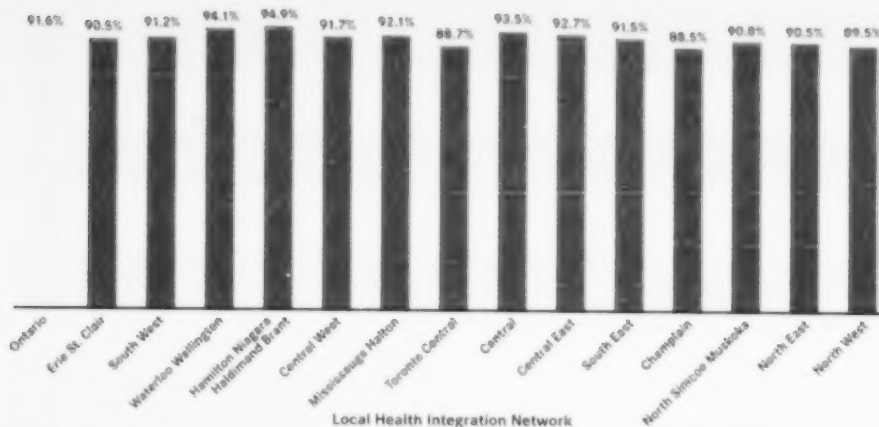
¹Ipsos Reid press release, "Canadians Agree That a Patient Wait Time Guarantee Is The Most Important Priority for Canada's New Government", November 29, 2006. Found at: <http://www.ipsos-na.com/news/pressrelease.cfm?id=3287>. Accessed: December 14, 2006.

²Ontario Telemedicine Network — Statistical Report, Ministry of Health and Long-Term Care, October 15, 2006.

³This data is based on self-reporting of access to any kind of "regular medical doctor" including family doctors or specialists.

This number was calculated within the range of the difference between 2003 results from the Canadian Community Health Survey and the 2006 results from the first three waves of the Primary Care Access Survey. Appropriate analyses were used to make the two sets of results comparable.

Proportion of Ontario Population (Age 18+) Reporting Regular Medical Doctor by Local Health Integration Network, 2006



Source: Primary Care Access Survey (Waves 1, 2, and 3), Ministry of Health and Long-Term Care, 2006.

ACCESS TO A FAMILY DOCTOR FOR PEOPLE WITH CHRONIC MEDICAL CONDITIONS

Having a regular family doctor is important for people with chronic diseases, such as diabetes, arthritis, high blood pressure, heart disease or cancer, because they need someone to monitor their progress, provide overall management of their health and help get them to appropriate specialist services when they need them. In 2006, 96.2 percent of individuals with one or more chronic diseases had a regular family doctor and the number was 97.3 percent for elderly people with chronic disease.¹ The high rates of chronically ill people with a family doctor mean these physicians play a key role in the management of chronic disease.

3.1.2 Access to specialty care

Faced with public concern over waiting lists for specialty services, Ontario, the other provinces and territories and the federal government signed a 10-year plan for strengthening health care in September 2004. Included in the deal was \$5.5 billion from the federal government to boost efforts to reduce wait times for heart and cancer treatments, joint replacements, MRI and CT scans and cataract surgery. Like the others, Ontario had to choose measures for assessing its services in those areas and set goals for cutting waits.

Access to Health Services in Ontario,² published by the Institute for Clinical Evaluative Sciences (ICES), recommended that measuring access to specialty care should include checking the rates (usually, how many per 100,000 population) at which services are provided, how long people wait for procedures and whether people are getting the right services, based on what's wrong with them and what the effects of the services are. Counting the number of patients who get services is easy enough, but deciding whether they waited too long or benefited from the service is more difficult.

The Ontario Wait Time Strategy is designed to reduce wait times by increasing rates of surgery and improving the way that waits for surgery are managed. ICES has used physician billing data and information on hospitalized patients to calculate rates of use per 100,000 for these services in the last full year before the Wait Time Strategy



Primary Care Access Survey (Waves 1, 2, and 3), Ministry of Health and Long-Term Care, 2006.

Tu JV, Pinfold SP, McColgan P & Laupacis A. Access to Health Services in Ontario – Institute of Clinical Evaluative Sciences, April 2005.



was started (fiscal year 2003/04) and the first full year (2005/06) after it was launched. The data show relatively small changes in rates for some of the cancer surgeries, which makes sense, because the issue with many cancers is not whether enough surgery is being done but how long people have to wait to get it. The increase in radical prostate surgery probably happened because of a study that showed this procedure can keep the cancer from returning. Early detection of cervical cancer by screening with Pap smears (see section 3.9.3) and prevention of cervical cancer using vaccination for HPV (Human papilloma virus) may reduce the number of women who need a hysterectomy in the future. Because both bypass surgery and coronary angioplasty clear blockages in the coronary arteries, the decrease in bypass surgery rates is outweighed by the increase in angioplasty; overall, there were more operations to treat heart blockages. The biggest increases are for hip and knee replacement, cataract surgery and high-technology diagnostic scans.

When it comes to the wait for a specialty service, the Ontario Wait Time Strategy has made it possible to track the wait from when a specialist orders a scan or surgical procedure to the time when it happens.

Although we would like to measure the wait from the time people are first referred to the specialist by their family doctor, it is not yet possible in Ontario. The tracking is a key ingredient to be able to work on reducing waits. In section 4.4, we explain all the elements needed for achieving improvement.

People often refer to average wait times for services, but that can be misleading, because a small number of extremely long waits can make the overall situation seem worse. Median waits, where half of patients wait less time, and half wait more, are also used. In our report, we use the "90th percentile wait time," which is the length of time where 90 percent of patients waited a shorter time and 10 percent waited longer. The 90th percentile tells us the maximum wait for the majority of patients, since there will always be some who wait longer for reasons unrelated to the health system, such as other complications with their health that must be brought under control before the procedure can be performed.

Rate at which Select Medical Services are Performed in Ontario

(per 100,000 population)

	Rates per 100,000 population		Percentage change in rate
	2003/04	2005/06	
Hysterectomy for cancer	62	60	-3.2
Mastectomy for cancer	91	98	+7.7
Radical prostatectomy for cancer	99	123	+24.2
Large bowel resection for cancer	111	108	-2.7
Cardiac angiography	519	572	+10.2
Coronary angioplasty	166	194	+16.8
Coronary artery bypass surgery	85	79	-7.1
Cardiac revascularization	251	273	+8.7
Cataract surgery	1,115	1,352	+21.3
Hip replacement	107	127	+18.7
Knee replacement	141	201	+42.5
MRI scan	1,666	2,487	+49.3
CT scan	8,293	10,317	+24.4

Source: Institute for Clinical Evaluative Sciences - Evidence guiding health care.

Holmberg J, Bill-Axelson A, Helgesen E, Salo JO, Folmerz P, Haggman M et al. (2002) A randomized trial comparing radical prostatectomy with watchful waiting in early prostate cancer. *New England Journal of Medicine*, 347: 781-9,10.
 Rates for mastectomy and hysterectomy are for women 40 years of age and older, rates for radical prostatectomy are for men 40 years of age and older, rates for large bowel resection are for individuals 40 years of age and over, rates for cardiac procedures and hip and knee replacement are for individuals 20 years of age and older and rates for scans are for all age groups.

Ontario 90th Percentile Wait Times, August-September 2005 to October-November 2006¹¹

Procedures	Actual 90 th Percentile Wait Time (Days)		Change	
	Aug.-Sept. 2005	Oct.-Nov. 2006	Days	%
Cancer surgery	81	78	-3	-3.7
Coronary angiography	56	26	-30	-53.6
Angioplasty	28	20	-8	-28.6
Bypass surgery	49	47	-2	-4.1
Total hip replacement	351	278	-73	-20.8
Total knee replacement	440	357	-83	-18.9
Cataract surgery	311	209	-102	-32.8
MRI	120	113	-7	-5.8
CT scan	81	70	-11	-13.6

Source: Wait Times Information Office, 2006; Ministry of Health and Long-Term Care.

Using August and September 2005 as a baseline, the most recent data (October and November 2006) show the 90th percentile wait times have gone down for all nine services included in the Wait Time Strategy. The biggest decreases were in wait times for cataract surgery and joint replacements, which have all dropped by about three months compared to baseline rates.

There are targets across the country for the maximum time a patient should wait from the time a treatment is ordered until it is received, depending how urgent the need for treatment is. For example, while the target wait time for cataract surgery is 182 days for low-priority cases (priority 4), the highest priority cases (priority 1) should have immediate surgery. In between those extremes, the target for priority 3 cases is 84 days and for priority 2, 42 days.

Ontario has set targets that are the same or shorter than the Canadian targets for most of these procedures,¹² but because our wait-time reporting does not separate waits by priority level, it's hard to tell how we're doing in comparison to other parts of the country. A more detailed system to measure wait times is being developed, which will be able to track wait times for all surgical procedures, sort cases by priority and help manage patients in the queue. At the end of November 2006, the new system was collecting waiting data on completed cases in 52 hospitals, accounting for over 90 percent of cases under the Wait Time Strategy.

The experts who are advising on the wait strategy say the province needs to adopt guidelines on who will benefit from certain services. There is scientific evidence that can tell us when procedures or tests are needed, including how severe symptoms should be before a person is added to a wait list for surgery. A Canadian evaluation of non-emergency surgery noted that cataract surgery is often done on patients whose symptoms and disability are quite minor,¹³ and the experts advising on hip and knee replacements suggested that might be true of joint replacements as well. For these patients, the risk of having the procedure may outweigh the potential benefits. "The importance of appropriateness targets for joint surgery will become more apparent when the backlog of patients who need joints is reduced".¹⁴ While it is certainly important to reduce wait times for procedures that will improve patients' health, there's no benefit to cutting waits when the procedure isn't necessary or appropriate for the patient to begin with.

Electronic records would provide an invaluable tool for continuing improvement in surgical and diagnostic care. It would allow us to measure the full wait experienced by patients, starting with their first visit to their family doctor. It would also help us to assess how that care is being delivered — how effective and safe it is, and how smoothly the patient progresses from one stage to the next.

¹¹ Waiting times for joint replacement, cancer and cataract surgery are measured from the date at which investigations are complete, diagnosis discussed with patient and decision to operate is made by surgeon and agreed to by the patient. Waiting periods for cardiac procedures are counted from the date a patient was accepted for angiography, angioplasty or bypass surgery by a cardiologist or cardiac surgeon. Waiting periods do not include time spent investigating heart disease before a patient is accepted for a procedure. For example, the time it takes for a patient to have a heart catheterization procedure before being referred to a heart surgeon is not part of the waiting time shown for heart surgery (Wait Times Information Office, 2005). Patients who did not reside in Ontario at the time of diagnosis; patients of unknown age or unknown country of residence; and individuals only diagnosed at or following death will be excluded.

¹² Ontario Sets Wait Times Access Targets in Five Key Areas. Ministry of Health and Long-Term Care, December 16, 2005. Found at: http://www.health.gov.on.ca/english/media/news_releases/archives/nr_05/nr_121605.html. Accessed: October 2006.

¹³ Wright C, Chambers GK & Roben-Paradise Y. (2002) Evaluation of Indications for and Outcomes of Elective Surgery. CMAJ; 167(5).

¹⁴ Gross A. Report of the Total Hip and Knee Joint Replacement Expert Panel - Expert Panel Chair, September, 2005.

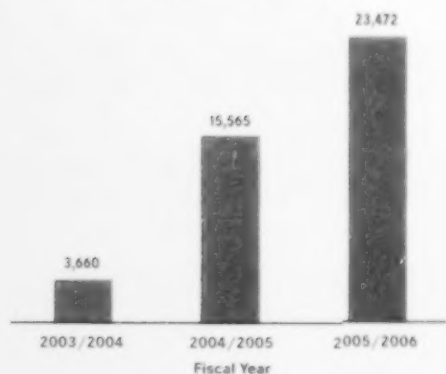
3.1.3 Improving access using telemedicine technology

Ontario's mix of dense urban areas and large, sparsely populated rural and remote areas demands different approaches to delivering care. Telemedicine is key to supplying services to many parts of the province. Telemedicine — the innovative use of videoconferencing and other technology to let patients get medical care unavailable close to home — is different from the free phone service, Telehealth Ontario, which you can call to get health advice or general health information from a registered nurse.

The Ontario Telemedicine Network delivers services at 359 telemedicine sites in over 190 communities in Ontario, many of them in remote and rural areas. Telemedicine also supports health-care professionals' development, skills transfer, recruitment, and retention. Telemedicine is a very cost-effective way to provide care, especially given the shortages of specialists in the province. Access to specialists and care that might otherwise be unavailable is faster, physicians and patients travel less, which saves money, and more patients are served.

Demand for telemedicine services is growing in Ontario. It's projected that by 2006-07, the number of telemedicine sites will have increased to 400 and the number of patients served will be close to 40,000.

Use of Telemedicine for Patient Consultations across Ontario, 2003/04 to 2005/06
(# of clinical events)



Source: Administrative Records, 2003-2006; Ontario Telemedicine Network, 2006

3.2 EFFECTIVE

"People should receive care that works and is based on the best available scientific information"

The care people get should be scientifically proven to benefit them; they should not receive services that are not likely to do so. A high-performing health system generates research on the best ways to provide care, and promotes use of that research to help providers use the best practices known. As we see in section 4.2, there are many examples around the world of how health systems can transform themselves to become high-performing. Providing high-quality care requires system redesign and a commitment to continuous quality improvement.

Clinical practice guidelines are one common tool for helping providers properly treat patients. However, there are many barriers to routinely applying many of these guidelines in practice. In section 4.3 we explain how health-care practice can be improved by translating research evidence into best practice guidelines, analyzing differences in care that's delivered, and co-ordinating strategies to increase appropriate use of these guidelines. The Ministry of Health and Long-Term Care and the Ontario Medical Association are partners in the Guidelines Advisory Committee, which encourages physicians and other practitioners to use evidence-based guidelines. Others are produced for the Ontario Stroke System and Cancer Care Ontario and by professional organizations for their members (such as nurses and technologists).

Guidelines must be based on research evidence and clinical expertise and results should be monitored to see if they are being used. Health-care organizations and providers can benefit from help on how to best implement guidelines into the everyday care of patients. Quality measures based on guidelines are an obvious way to measure whether efforts to improve quality are working. For example, if we know a specific drug increases survival after a heart attack, then strategies to increase the use of that drug should lead to more people surviving heart attacks. However, it's important to remember there are limits to health care. Best practices can increase survival for some cancer patients but not for others. Even with the best care, some patients will die of heart attacks or be permanently disabled by a stroke.

The goals of the Ontario Stroke System are to reduce the number of strokes in Ontario and improve care for the people who suffer them. The stroke system has led to better planning and co-ordination of stroke care across Ontario, as well as promotion of evidence-based care, telemedicine and a public awareness campaign (with the Heart and Stroke Foundation of Ontario) on stroke warning signs. The results are improved diagnosis and acute management of stroke, more patients getting specialized care at stroke centres and spending less time in hospital. Good stroke care is a mix of general and specialized health care, rehabilitation and residential and support services. To bring that to Ontario, the stroke system created networks among all of them. Its integrated approach means agencies work together to plan and make changes. There are regional and district stroke centres, stroke-prevention clinics and telemedicine for stroke care to improve access across the province to acute stroke therapies and expert physicians. There's also a province-wide evaluation program co-ordinated by the Canadian Stroke Strategy to monitor how well stroke care is working — and the answer is, there are measurable improvements in the type and quality of stroke care in Ontario, especially during the critical early days following stroke. In fact, the stroke system is so successful it's being used as a model for a Canadian Stroke Strategy, with the goal of getting a stroke strategy in every province by 2010.

3.2.1 Provision of recommended care for chronic conditions

Chronic diseases are the most common causes of disability and premature death in Ontario. These diseases, such as diabetes, heart disease and cancer, are also a way to measure whether we're giving good care, because there are many treatments that make a big difference in the course of these conditions. When patients don't get these well-known treatments they are much more likely to end up in hospital or have serious complications. We've chosen four sets of measures to tell us how effective the health system is in dealing with chronic disease and its consequences:

- Provision of recommended care for chronic diseases;
- Survival after heart attack, stroke and selected cancers;
- Readmission to the hospital after inpatient treatment for heart attack, asthma or mental illness; and
- Return of function after stroke.

We get data for assessing chronic disease care from two sources — billing information and patients' paper medical records. The paper records from hospitals contain details on the patient's condition and services provided and the records in providers' offices present

additional important information. Reviewing paper charts is very expensive — this is another reason we need standardized electronic medical records for all patients.

Chronic diseases are so common and there is much evidence about how to best improve outcomes for people who have chronic conditions. Evidence-based guidelines are available as a tool to help providers improve the quality and outcomes of care for these conditions. The Guidelines Advisory Committee, a joint initiative of the ministry and the Ontario Medical Association, has a series of guidelines for different elements of diabetes care for use by family doctors. One recommendation is that all newly diagnosed type 2 (or adult-onset) diabetes patients have a specialist eye exam when they're diagnosed¹ because diabetes can lead to blindness, but that's preventable with proper care.² In 2004/05, only 45 percent of newly diagnosed diabetes patients aged 30 years or older had an eye examination within one year of diagnosis. Across the province, the rates range from a low of just over 40 percent to more than 50 percent in Northwestern Ontario — where the Ontario Medical Mobile Eye Care Unit operates. Started in 1972 by the Canadian National Institute for the Blind, the service brings vision screening to remote communities. Eye care is only one part of what a diabetes patient needs, and it is likely that improvements are needed in other areas

Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. (2003) Canadian Diabetes Association 2003 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Canadian Journal of Diabetes* 27 (2): 51-52. Found at: <http://www.diabetes.ca/cpg2003/download.aspx>. Accessed: September 27, 2005

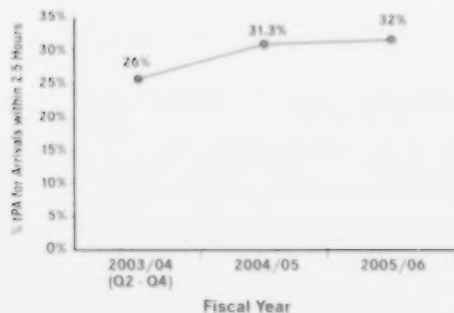
Hux JE, Booth GL, Slaughter PE, & Laupacis A. Diabetes in Ontario: An ICES Practice Atlas. *Institute for Clinical Evaluative Sciences*, 2003.



of diabetes care as well. We need to be able to routinely assess whether people with diabetes are getting all of the recommended care they need to prevent other complications of diabetes, including heart and kidney disease. Electronic medical records would allow us to do this and decision support systems in doctors' offices could help make it easier for doctors to use these guidelines in practice.

The Ontario Stroke System was established to improve stroke care across the province. It publishes a quarterly performance report that measures acute-care treatment of stroke patients at nine regional stroke centres and two district stroke centres, which treat approximately 20 percent of all stroke patients in Ontario. One of the treatments it measures is the percentage of stroke patients who arrive at a centre within 2.5 hours of stroke onset and are given thrombolytic therapy (tPA), a drug that breaks down clots to get oxygen to the brain.

Stroke Patients at Regional and Enhanced District Stroke Centres Who Receive Thrombolytic Therapy within 2.5 Hours of Stroke Onset, 2003/04 to 2005/06 (%)



Source: Stroke Performance Indicator Report, Ontario Stroke System, 2006.

There is no formal target for the percentage of stroke patients who should receive tPA, but the Ontario Stroke System analysis shows the performance of regional and enhanced district stroke centres, which give the drug to 32 percent of eligible patients¹⁰, is much higher than the rates of six to 12 percent reported in journals.

Cancer Care Ontario uses the Cancer System Quality Index¹¹ to monitor 25 key indicators, including rates of new cancer cases, how long people wait for radiation treatment and patient satisfaction. Two of the indicators that assess how well treatment guidelines are followed are the rates of chemotherapy (technically called adjuvant systemic therapy) for stage 3 colon cancer and the percentage of stage 1 or 2 breast cancer patients treated with radiation.

In 2004 (the most recent year for which comprehensive data is available) 97 percent of patients with stage 3 colon cancer treated in regional cancer centres received the recommended treatment. There was little variation by cancer centre, but in four centres 100 percent of eligible patients got the recommended treatment. However, only about half of patients with colorectal cancer in the province receive care from a regional cancer centre and we don't have information on whether the rest of the patients are receiving care according to guidelines. This is another example of why electronic health records are needed to provide the necessary information to measure quality of care for all Ontarians.

¹⁰ The measure includes all patients with 'ischemic' type of stroke who arrive at hospital within 2.5 hours of stroke symptom onset.

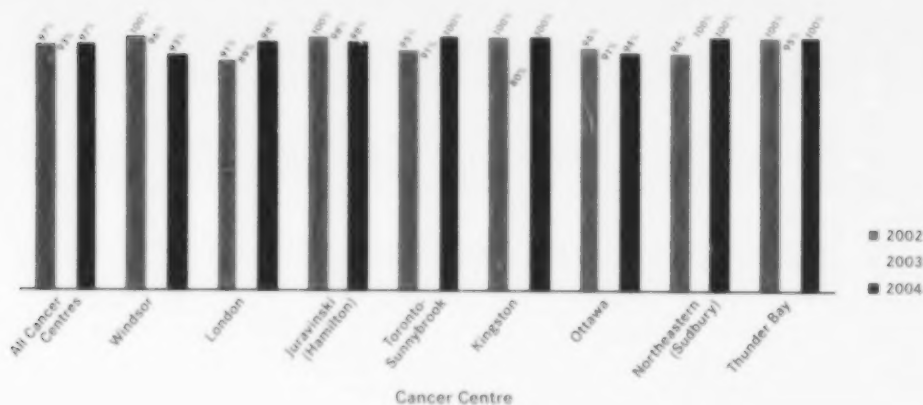
¹¹ Stroke Performance Indicator Report: Care of Acute Stroke Patients at Regional and Enhanced District Stroke Centres - July 2003 to March 2006, Ontario Stroke System Performance and Evaluation Specialist, September, 2006.

An *eligible patient* is defined as one who has an ischemic type of stroke (as opposed to a *hemorrhagic* stroke) and arrives at hospital within 2.5 hours of stroke symptom onset.

¹² Albright et al. (2005) Tissue Plasminogen Activator Use: Evaluation and Initial Management of Ischemic Stroke from an Iowa Hospital Perspective, *Journal of Stroke and Cerebrovascular Disease* 14 (3): 127-135.

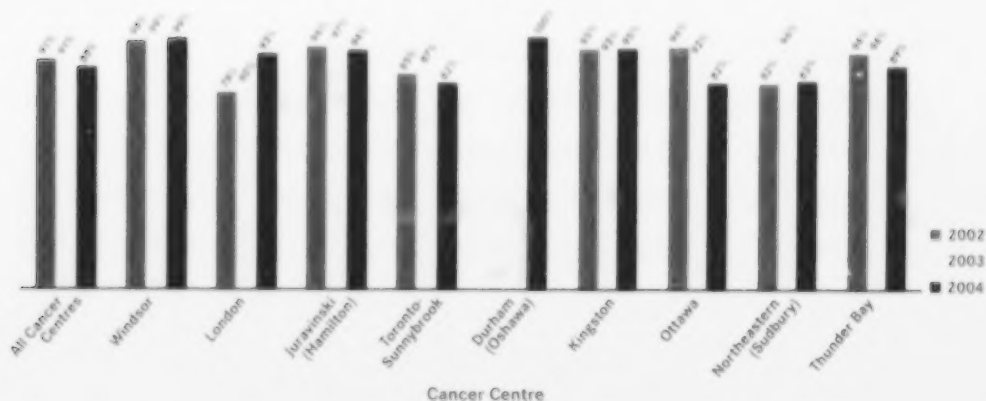
¹³ Cancer Quality Index 2006, Cancer Care Ontario. Found at: <http://www.cancercare.on.ca/qualityindex2006/>. Accessed December 15, 2006.

Newly staged stage 3 colon cancer patients treated with adjuvant systemic therapy according to the clinical practice guideline, 2002-2004 (%)



Source: Cancer System Quality Index, Cancer Care Ontario, 2006.

Stage 1 or 2 breast cancer patients treated with radiation treatment according to the clinical practice guideline, 2002-2004 (%)



Source: Cancer System Quality Index, Cancer Care Ontario, 2006.

Unlike colorectal cancer patients, we do have data on all women in the province with breast cancer who receive radiation therapy, so we can be sure that

performance on this measure is excellent. In 2004, almost 90 percent of eligible stage 1 or 2 breast cancer patients were treated with radiation as recommended.²⁰

No data were available from Princess Margaret Hospital, Grand River Regional Cancer Centre or Durham Regional Cancer Centre. Results do not include patients who received chemotherapy outside of reporting cancer centres or patients for whom stage, histology and/or provincial regimen were not recorded. The results do not include patients who should have been treated with chemotherapy but were not. Only left breast and right breast body regions included. Boost and bilateral breast excluded. Brachytherapy cases also excluded. Grand River Regional Cancer Centre excluded from analysis because no body region codes were available. There was no data from Princess Margaret Hospital, Breast Irradiation In Women With Early Stage Invasive Breast Cancer Following Breast Conserving Surgery - Practice Guideline #1-2, Cancer Care Ontario Program in Evidence-Based Care's Breast Cancer Disease Site Group. Found at: http://www.cancercare.on.ca/index_breastcancerguidelines.htm

Clinical practice guidelines aren't only used in hospitals. A recent study²⁰ of 547 long-term care homes in Ontario found many were using guidelines. Developing best-practice guidelines and strategies to get them used, as well as measuring how well they are followed, is key to the quality-improvement process. We look at this further in section 4.3. Cancer and stroke care providers are doing well in following these guidelines. We need better evidence about how well other parts of our health system are providing evidence-based care. In section 5, we look more closely at chronic disease management. We'll mention again that electronic medical records are needed — they make it easy to check whether care is following best-practice recommendations.

3.2.2 Survival after heart attack, stroke and selected cancers

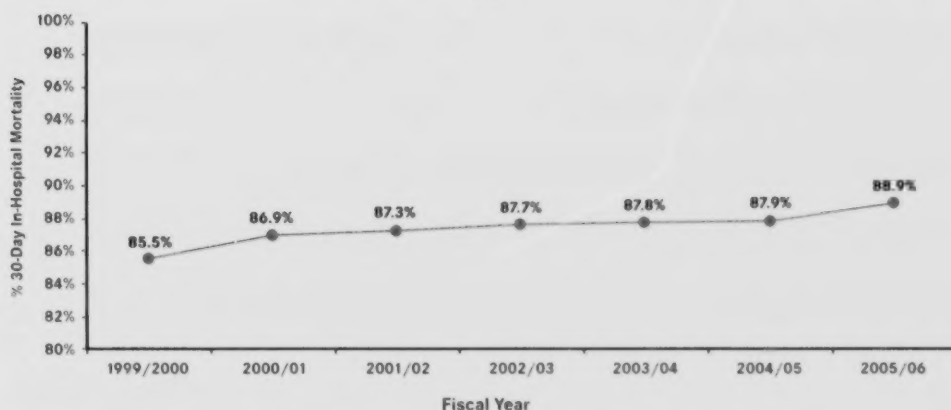
We examined rates of survival of patients following heart attack, stroke and cancer, because measuring trends in survival can help determine if the health-care system is using life-prolonging therapies and treatment strategies properly. However, it's important to remember there are limits to health care — survival rates can only improve where there have been advances in treatment.

The percentage of heart attack patients in Ontario acute-care hospitals who survive 30 days after admission (considered an important measure of the effectiveness of care) increased from 85.5 percent in 1999/2000, to 88.9 percent in 2005/06. Heart attack survival rates are also monitored for the Statistics Canada/CIHI Health Indicators. Those reports use a slightly different approach but, in 2003, showed the Ontario 30-day survival rate was equal to the Canadian average. Alberta had the highest survival rate, almost two percentage points higher than Ontario, which suggests we could further improve survival rates here.

Statistics Canada/CIHI Health Indicators also report on stroke survival. They show that in 2003, Ontario's 30-day survival rate was above the Canadian average — just slightly below the stroke survival rates in Alberta and PEI.

Survival of stroke patients has fluctuated between 82.6 percent in 1997/98 and 83.4 percent in the two most recent years. Based on audit findings, survival rates in 2002/03 showed that patients treated in regional stroke centres have survival rates that are four percent higher than stroke patients treated in acute-care hospitals. Regional stroke centres are able to achieve better outcomes of care by redesigning the way stroke

Age and Sex Standardized Rate of 30-Day Survival for Heart Attack per 100 Patients, Patients (Age 20+), 1999/2000 to 2005/2006 (%)

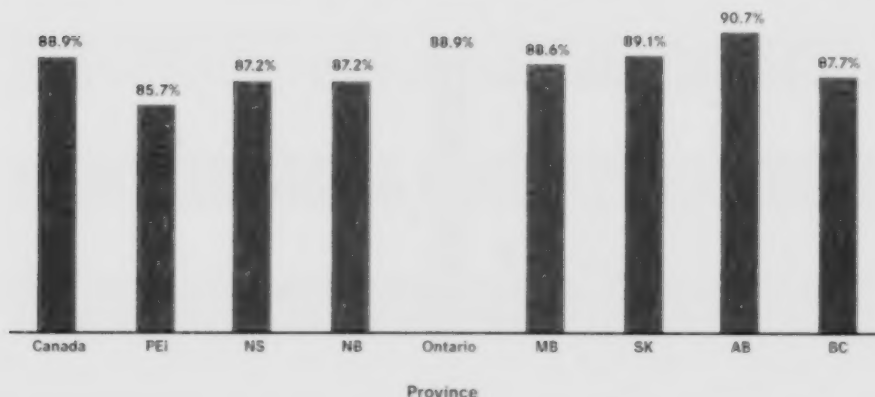


Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2006. Data derived from the Discharge Abstract Database (CIHI), Ontario Registered Persons Database and Statistics Canada Postal Code Conversion File (Statistics Canada).

Berta W et al. A Report on the Use of Clinical Practice Guidelines and Standardized Care Protocols in Long-Term Care Facilities Operating in Ontario, Working Paper 2006.

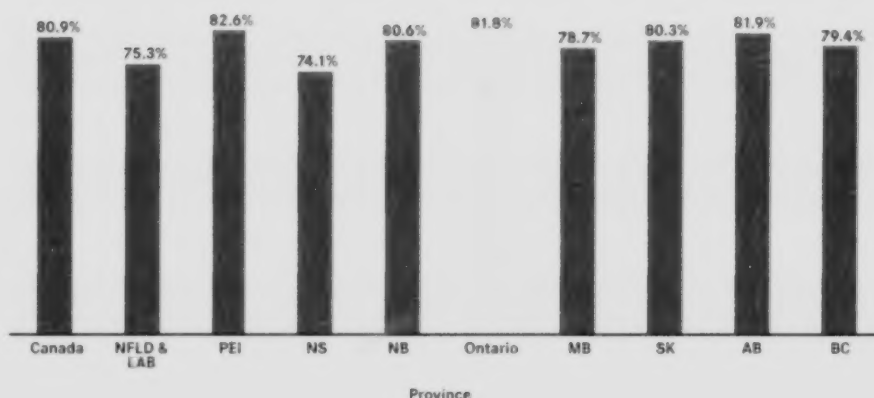
People who live outside of Ontario, who do not have a valid health card number or are under the age of 20 are excluded. Those who had a heart attack admission within one year prior to the date of the index episode, or patients whose records indicate that a heart attack was coded as a complication or who were discharged less than three days after admission were excluded.

**Percent Distribution 30-Day In-Hospital Survival Rate for Heart Attack,
for Canada and Selected Provinces, 2003**



Source: Health Indicators Report, Canadian Institute for Health Information 2006. Data derived from the Hospital Morbidity Database and Discharge Abstract Database (CCHI); 2004 Population Estimates derived from Statistics Canada Demography Division data (Statistics Canada).

**Risk-Adjusted Rate of Survival for 30 Days after First Admission
to an Acute-Care Hospital with a Diagnosis of Stroke, by Province, 2003**



Source: Stroke Performance Indicator Report, Ontario Stroke Strategy, 2006. Data derived from the Hospital Morbidity Database and the Discharge Abstract Database (CCHI).

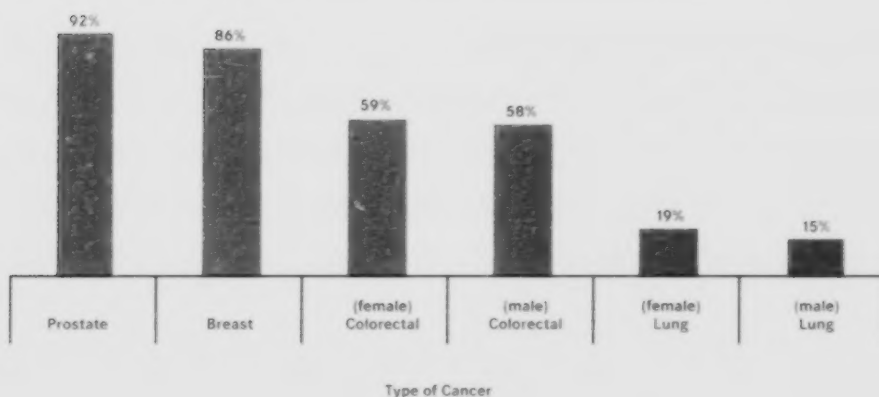
care is organized and delivered in the hospital and implementing strategies to make it easy for providers to adhere to guidelines. We can improve overall Ontario stroke survival rates by treating more stroke patients in regional centres and by helping acute-care hospitals redesign their stroke services so they can follow evidence-based guidelines for stroke care more closely.

Relative cancer survival compares how likely a cancer patient is to live for five more years, compared to members of the general population who are the same age and sex, live in the same region and share other characteristics. For example, Ontario men diagnosed with prostate cancer between 1996 and 1998 had a five-year relative survival rate of 92 percent — they were

¹ Rates are based on three years of pooled data, and the reference year reflects the mid-point of the three-year period. Data not available for Newfoundland and Labrador or Quebec.

² Rates are based on three years of pooled data and the reference year reflects the mid-point of the three-year period.

Five-Year Relative Survival Rates, Cases Diagnosed in Ontario, for the Most Common Cancers, 1996 to 1998



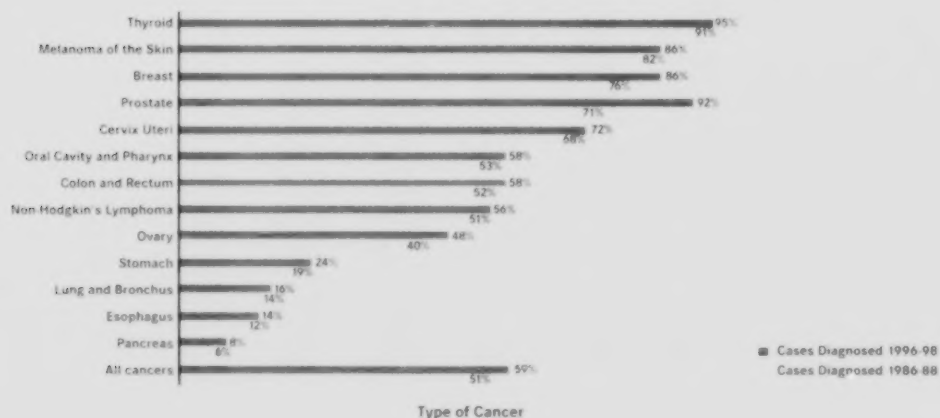
Source: Cancer System Quality Index, Cancer Care Ontario, 2006.

92 percent as likely to live five more years as Ontario men the same age who didn't have prostate cancer.

For patients diagnosed with cancer in Ontario between 1996 and 1998, the five-year relative survival was highest for prostate cancer (92 percent) and breast cancer (86 percent) and lowest for lung cancer (15 percent for men, 19 percent for women). Men and women had almost

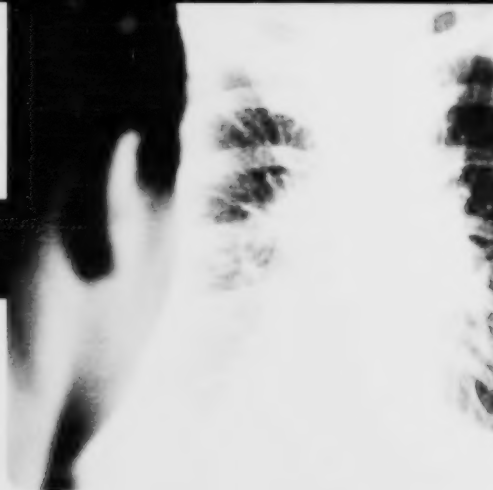
60 percent survival rate for colorectal cancer. We cannot give more recent information because calculating five-year survival rates requires extended follow up. Cancer Care Ontario reports five-year survival rates for all types of cancer have increased over the past decade, but improvement varies by type of cancer: there have been advances in treatment for some but not others.

Improvements in Five-Year Relative Ontario Cancer Survival Rate by Type of Cancer - Cases Diagnosed 1986 to 1988, versus Cases Diagnosed 1996 to 1998



Source: Cancer System Quality Index, Cancer Care Ontario, 2006.

Excludes: patients who did not reside in Ontario at the time of diagnosis; patients of unknown age or unknown country of residence; and individuals only diagnosed at or following death.



There has been little improvement in five-year relative survival for lung, esophageal and pancreatic cancer, but large improvement in survival for prostate, breast and ovarian cancer. Ontario's five-year relative survival rates for breast, lung and colorectal cancers are similar to most provinces. Ontario's five-year relative survival rates are slightly higher than Saskatchewan and Alberta for prostate cancer²², similar to U.S. rates²³ and similar to or slightly higher than those in Europe.²⁴ We would have better information on survival rates in Ontario if we measured stage-specific cancer rates. To calculate stage-specific rates, we need information on the stage of cancer, that is, how big the cancer was when it was diagnosed and whether or how far it had spread. However, this information is not routinely captured in existing data systems. Knowing cancer survival rates for different stages at diagnosis would help us judge whether screening programs are working, what treatments to use and whether we're calculating survival rates properly.

More and better screening is an important factor in improving survival rates for cancer, heart attacks and strokes.²⁵ Screening lets doctors detect cancers earlier, when there is a greater chance for success in treatment. This is especially true for breast cancer. People would be less likely to get these diseases in the first place if we could reduce lifestyle risks such as obesity and smoking. We'll discuss these further in the population health section at 3.9.

3.2.3 Readmission to hospital to treat chronic conditions

In a high-performing health system, patients are treated in hospital for as long as necessary then discharged home or to community care. Ideally, people with chronic disease are discharged when they are ready and have a plan for post-hospital care that will let them manage their condition and get better. Even with the best of care, some patients with chronic conditions need to be readmitted to hospital, but some return to hospital because they were discharged before they were ready or because they didn't get the right care outside of hospital. Going back to hospital can be used to measure quality of care for a number of chronic conditions. We looked at three:

- Readmission to hospital after care for a heart attack;
- Readmission after care for asthma; and
- Readmission of patients after care for psychiatric conditions.

Readmission following heart attack treatment may be due to medication problems, whether patients are complying with their therapy plans or getting good enough care in the community, or because there were problems diagnosing them or treating them when they were first admitted. From 2002 to 2004, 7.2 percent of Ontario heart attack patients were readmitted within 28 days with a diagnosis related to the initial attack.

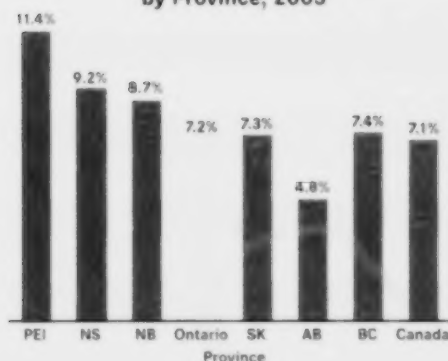
Canadian Cancer Statistics, 2006, Canadian Cancer Society and National Cancer Institute of Canada.

Based on a comparison to the SEER Cancer Statistics Review, 1975-2002.

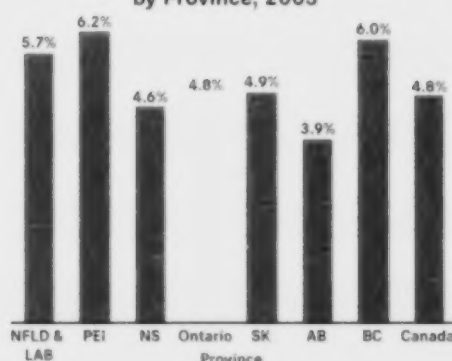
Based on a comparison to EURO-CARE-3 data on 5-year relative survival for all cancers combined: Roazzi P, Capocaccia M, Santaquilani M, Carrani F & the EURO-CARE Working Group. (2003) Electronic availability of EURO-CARE-3 data: a tool for further analysis. *Annals of Oncology*, 14 (Supplement 5): v150-v155.

Cancer System Quality Index 2006, Cancer Care Ontario. Found at: <http://www.cancercare.on.ca/qualityindex2006/>.

Risk-Adjusted Rate of Unplanned Readmission to Hospital within 28 Days of Initial Admission, for Heart Attack Patients, by Province, 2003



Risk-Adjusted Rate of Unplanned Readmission to Hospital within 28 Days of Initial Admission, for Asthma Patients, by Province, 2003



Source: Health Indicators Report, Canadian Institute for Health Information, 2006. Data derived from the Discharge Abstracts Database (DAD).

Source: Health Indicators Report, Canadian Institute for Health Information, 2006. Data derived from the Discharge Abstracts Database (DAD).

Ontario's rate of patients readmitted after heart attacks (7.2 percent) is very close to the Canadian average, but it's clear we could do better because Alberta's rate (4.8 percent) is so much lower. Better co-ordination of care among hospitals, community providers and ambulatory care clinics would help reduce the Ontario rate.

Asthma is a lung condition where patients are often short of breath and wheeze. Some cases are so bad patients have to be hospitalized to control their attacks. Readmission rates after treatment tells us how well the acute attack was handled and if the patient could manage their condition in the community. From 2002 to 2004, 4.8 percent of Ontario asthma patients were readmitted within 28 days of their initial hospitalization and again, Alberta did best among the provinces with a readmission rate for asthma patients of 3.9 percent. If we did a better job of managing chronic disease in the community (which we discuss in section 5) fewer people would go to hospital for asthma and fewer would have to return.

The Ontario Respiratory Outcomes Research Network examined differences in hospitalization for asthma in

Ontario.¹⁰ They concluded different hospitals had different thresholds for when a person with asthma needed inpatient care. That makes it hard to compare rates across the country, because different hospitals or provinces may look for different levels of illness before they admit people, which also changes the likelihood someone will be readmitted.

Mental illness is often a chronic condition, where people are treated in hospital when they're acutely ill and monitored and treated in the community over the long term. The readmission rate of acute-care psychiatric patients was reported as 10.5 percent from 2002 to 2004 and 10.4 percent from 2003 to 2005.¹¹ However, because this is a new measurement, we only have those two pieces of information and we can't tell whether readmission is increasing or decreasing. We also need information about whether these patients are getting the care they need when they return to the community and how many of these readmissions could have potentially been prevented with better co-ordination of care between the hospital and the community.

¹⁰ A case is counted as a readmission if it is for a relevant diagnosis and occurs within 28 days of the initial heart attack admission. Rates are based on three years of pooled data, and the reference year reflects the mid-point of the three-year period. Data is not available for Newfoundland and Labrador, Quebec, and Manitoba.

¹¹ A case is counted as a readmission if it is for a relevant diagnosis and occurs within 28 days of the initial admission. Rates are based on three years of pooled data, and the reference year reflects the mid-point of the three-year period. Data not available for New Brunswick, Quebec, and Manitoba.

¹² Loughheed MD, Garvey N, Chapman KR, Cicuto L, Dales R et al. (2006) The Ontario Asthma Regional Variation Study: Emergency Department Visit Rates And The Relation To Hospitalization Rates. *Chest*; 129(4):909-17.

This indicator is calculated as the number of unplanned readmissions for a psychiatric diagnosis within 28 days of discharge from a hospitalization for a psychiatric episode, divided by all psychiatric hospitalizations.

3.3 SAFE

"People should not be harmed by an accident or mistakes when they receive care."

When we talk about adverse events³¹ in health care, we mean unintentional injuries or complications that happen when people are cared for — not what the illness does to them, but things that happen as a result of getting care. There are many ways people are unintentionally hurt during care — they can get an infection in hospital, or a mistake can be made when they're given drugs or blood transfusions. They may have a fall, or some other accident that leads to injury, disability or death. Some adverse events are preventable, others are part of the regular risks from health care. They're not necessarily caused by mistakes.

There was a cross-Canada study³² in 2000 to estimate the size of the problem. Its findings suggest there were between 32,000 and 43,000 potentially preventable adverse events in Ontario out of about one million hospital admissions. So approximately one out of every 13 hospital admissions resulted in some kind of adverse event. The study found the most common adverse events were related to surgery (34.1 percent) or drug-or intravenous-fluid-related events (23.6 percent). Surgery patients were most likely to suffer — 51.4 percent of adverse events occurred in patients who were in hospital for an operation.

Avoidable adverse events harm patients, demoralize staff and diminish Ontarians' confidence in the health-care system. Patients who suffer adverse events stay much longer in hospital than others and increase costs.³³

There are many ways patients can be hurt in hospitals, so they are divided into categories when we look at increasing patient safety. There are events that should never happen³⁴, which means it is usually possible to prevent them. "Never" events include operating on the wrong part of the body or on the wrong patient, leaving

equipment in a patient after surgery, or maternal death or disability during a low-risk labour and delivery. However, while these types of major errors capture the attention of the public and the media, they happen too rarely to be used as a reflection of overall service quality or safety.

Other adverse events include doing the wrong things, such as giving a patient the wrong drug, or the wrong combination of drugs, or the wrong dosages. They also include failing to do the right thing, such as not monitoring vital signs or falling short in effective infection control procedures. Infection control should include surgical wound infections as well as exposure to other infectious diseases while in hospital, such as influenza, Norwalk virus and difficult-to-treat bacteria.

Errors caused by improperly carrying out a prescribed treatment should be preventable, but it's not always possible to prevent adverse events such as a bad reaction to drugs. We get a much better picture of whether a hospital is safe by looking at its performance on routine, but important, tasks such as controlling the blood sugar levels of diabetic patients in intensive care, or whether patients are getting the right medications for their condition.

The province is developing ways to increase patient safety. For example, the Ministry of Health has the Drug Profile Viewer System. Authorized staff in emergency departments, including physicians and triage nurses, has electronic access to prescription records



³¹ In the Baker and Norton study of adverse events in Canadian hospitals, "adverse events" are defined as "unintended injuries or complications, which result in disability, death or prolonged hospital stays, and are caused by the management of an individual's health care services while in hospital." Baker RG, Norton PG, et al. (2004) The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada. CMAJ; 170 (11): 1678-1686.

³² Baker RG, Norton PG, et al. (2004) The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada. CMAJ; 170 (11): 1678-1686.

³³ A 2004 study in the United States calculated hospital costs associated with post-operative complications and found stays by surgical patients with major complications cost an average of \$11,626 (U.S.) more than surgical patients without complications. A study of non-cardiac surgery patients in a Canadian hospital found the most common post-operative complication was pneumonia, and patients who got it stayed in hospital 89 percent longer, with a 55 percent increase in hospital costs.

³⁴ For example: National Quality Forum (2003): Serious Reportable Events in Healthcare ("Never Events").



for people whose medications are paid for by the province. With it, health-care providers in most Ontario hospital emergency departments can check for potential drug reactions that could hurt the patient, as well as getting information crucial for emergency care.

Unfortunately, most health-care facilities are just starting to collect data on adverse events and don't have computer systems that allow us to look at them over time. We have two measures of patient safety — hip fractures suffered in acute-care hospitals, and chronic-care patients with stage 2 skin ulcers (bed sores which are difficult to treat and are prone to infection). Approximately 0.6 percent of acute-care patients in Ontario break their hips while in hospital, which is lower than the Canadian average of 0.8 percent, while six percent of chronic care patients have stage 2 or worse skin ulcers.⁴⁰ We can't tell if these rates are improving, however, since the numbers are small and the data have only been routinely collected recently. Broken hips and bed sores shouldn't happen if patients are properly cared for, and there are proper

systems to catch errors or alert staff to high-risk situations. Safety equipment, formal guidelines for care, and the design of the hospital can largely prevent these patient injuries.

Other jurisdictions recognize the need to monitor patient safety and adverse events. In the United States, the federal Agency for Healthcare Research and Quality (AHRQ) has developed software to screen for adverse events that indicate the level of patient safety in hospitals. Hospitals use the software to collect, analyze and report patient safety data.⁴¹ The Manitoba Centre for Health Policy adapted some of the AHRQ measures for use with Canadian data and compared indicator performance across regions and hospitals within the province.⁴²

It's important to remember, however, that safety is much more than avoiding dramatic errors. For most patients and most situations, safety is a question of doing routine things well. For that reason, care for patients with chronic

Bedsore — technically called pressure ulcers — were once considered almost inevitable in a long illness, but we know most can be avoided with the right care. Ottawa's SCO Health Service provides a variety of continuing care including long-term care, complex continuing care, palliative care and rehabilitation. In 2000, it introduced the Registered Nurses Association of Ontario's guideline for preventing pressure ulcers. The guideline's recommendations cover practice, including assessment, planning and intervention; education, the skills nurses need to work with patients who might develop pressure ulcers; and organization and policy, which talk about the importance of the employer creating an atmosphere that encourages high-quality nursing care. The SCO Health Service's use of the guideline improved patient safety by increasing the staff's knowledge of how to prevent and care for pressure ulcers and other skin problems in long-term care.

Ontario Health System Scorecard 2006/07 (draft), Ministry of Health and Long-Term Care — Health Results Team — Information Management, November 2006.

Patient Safety Indicators Fact Sheet, AHRQ. Found at: <http://www.qualityindicators.ahrq.gov/downloads/psi/2006-Feb-PatientSafetyIndicators.pdf>. Accessed: December 13, 2006.

Bruce S. et al. Application of Patient Safety Indicators in Manitoba: A First Look. Manitoba Centre for Health Policy, June 2006.

illness is a particularly important area to assess for safety and overall quality. People with chronic disease who aren't properly cared for can have their health break down, which, in addition to their suffering, is expensive for the health-care system. Unfortunately, the evidence is that chronic conditions are usually not managed well in either the U.S.²⁰ or Canada.²¹

Ontario needs a set of measures that indicate the overall safety of health-care services, programs and facilities. We measure broken hips and bedsores in hospitals, but we need indicators that would help us judge the safety of community and long-term residential care, primary health care and all other major services.

In our previous report we noted a report was being prepared by the Ontario Patient Safety Task Force. We looked forward to its guidance to advance Ontario's ability to measure and improve safety. The task force has submitted that report to the Minister of Health but at time of writing it had not been publicly released.

It will take more than better data to improve patient safety, however. We know adverse events are significantly underreported,²² which may be because those involved fear being sued.²³ But it's important that organizations encourage people to voluntarily report adverse events and near-misses, rather than covering them up. Unless we know where things are going wrong, and how, we can't learn from them or correct the flaws in the system that let them happen in the first place. This requires a blame-free environment where error and harm are seen as problems in the system, not failings by individuals.

3.4 PATIENT-CENTRED

"Health-care providers should offer services in a way that is sensitive to an individual's needs and preferences."

Many aspects of the health-care system have been structured for the benefit and convenience of health-care providers and not necessarily patients. In response to greater patient knowledge of health issues, the health-care system has been striving to be more service-oriented and to respond more to patients' needs and preferences. We call this "patient-centred care." Measuring patient satisfaction is important because it shows how sensitive providers are to patient needs — and it can also be used to predict how well patients will follow doctors' advice. This is particularly important for individuals with chronic diseases because following their doctors' instructions about medication can be the deciding factor in their future health.

This year the quality council has focused our assessment of patient-centred care on how patients perceive the care provided by physicians. In the future we hope to look at how patients feel about care provided in emergency departments, acute-care hospitals and long-term-care institutions, building on the work done over the past 10 years by the Ontario Hospital Report.



McGlynn EA, Asch SM, Adams J, Keesey J, Hicks J, DeCristofano A & Kerr EA. (2003) The quality of health care delivered to adults in the United States. *New England Journal of Medicine* 348: 2635-45.

Katz A, De Coster C, Bogdanovic B, Sooden R-A & Chateau D. Using administrative data to develop indicators of quality in family practice. Manitoba Centre for Health Policy, March 2004. Found at: http://www.umanitoba.ca/centres/mchp/reports/pdfs/quality_w0.pdf.

Furberg CD, Levin AA, Gross PA, Shapiro RS & Strom BL. (2006) The FDA and drug safety: a proposal for sweeping changes. *Arch Intern Med* 166 (18): 1938-42.

Gilmour J. (May, 2006) Patient Safety, Medical Error and Tort Law: An International Comparison. Health Policy Research Program, Health Canada. Found at: [http://osgoode.yorku.ca/osgmedia.nsf/0/094676DE3FA006A5852572330059253C/\\$FILE/FinalReport_Full.pdf](http://osgoode.yorku.ca/osgmedia.nsf/0/094676DE3FA006A5852572330059253C/$FILE/FinalReport_Full.pdf).

Knowledge is power — and one of the things that can make cancer patients feel less helpless in the face of the disease is to seek out the knowledge that they need to take an active role in their own care. To assist patients in their knowledge-seeking efforts, Toronto's Princess Margaret Hospital created a multi-faceted education program. It includes an interactive cancer-treatment education series with information on radiation for kids, a patient education intranet, a virtual tour of the hospital in seven languages, a guide for families and friends, and a patient and family library. Together, these computer-assisted education tools allow patients to learn at their own pace and level about their cancer and treatment options. One tool in particular is changing the way patients learn and participate in their cancer care. The "Getting Results" program is allowing patients to see their blood test results online, along with information about what those test results mean. This tool is designed to assist patients in managing their care in order to make clinic visits more effective and enhance the efficiency of the process. The educational products and services for patient education are available in several languages and were developed to adapt to different learning levels. The program includes training tools for health professionals and has been adopted by Cancer Care Ontario.

We used the Primary Care Access Survey for measures of patient-centred care. It asks patients about care when they were sick as well as during regular check ups and whether they were satisfied with access to care. We don't have the information to tell us whether satisfaction is increasing or decreasing but the survey did find:

- 91.2 percent of respondents were satisfied with care when they were sick and the rate was 92.2 percent in those with chronic disease;
- Slightly more (93.1 percent) of respondents were satisfied with care during regular check ups; the rate was 92.7 percent for those with chronic disease;
- 87.4 percent of respondents — and 90 percent of those with chronic disease — were satisfied with access to care when they were sick; and
- Overall, 86.3 percent were satisfied with access for a regular check up and the rate was 88.6 percent in respondents with chronic disease.

Other provinces do not systematically collect and report rates for these measures of satisfaction with access and care but in a national survey, 68 percent of Canadians rated the quality of care they received as excellent or very good and another 20 percent rated the quality of care as good. In a survey of primary-care experiences in five English-speaking countries,¹⁰ the total percentage of respondents rating quality of care as good, very good or excellent were: Australia — 90 percent, Canada — 88 percent, New Zealand — 89 percent, United Kingdom — 85 percent and the United States — 83 percent.

We would learn more about patient-centred care if we could measure what patients think about specific aspects of their care, such as the quality of communication with their doctor or other care providers, in addition to measuring general satisfaction with care.

Percentage of respondents indicating they were very or somewhat satisfied with the care provided by their regular primary care physician when they required care due to sickness or a health concern. The results reported are for respondents 18 years of age and over. Primary Care Access Survey (Waves 1, 2 and 3). Ministry of Health and Long-Term Care, 2006.

Schoen C, Osborn R, Huynh PT, Doty M, Davis K et al. (2004) Primary Care and Health System Performance: Adults' Experiences in Five Countries. *Health Affairs*, 4: 487 - 503.

3.5 EQUITABLE

"People should get the same quality of care regardless of who they are and where they live."

It's a core Canadian value that everyone in this country should be able to get the health care they need, when and where they need it, regardless of their ability to pay. *The Canada Health Act* gives five key criteria for health care: public administration, universality, comprehensiveness, accessibility and portability. However, unmet health-care needs, barriers to care, different results from care and unequal levels of health persist, often related to differences in gender, age, language, immigrant status, physical or mental ability, education or income level or where people live.¹⁷ We highlighted our concern over these disparities in our first report.

Many things contribute to health disparities. In section 3.9 we discuss how social factors, including living and work conditions, result in health differences among different groups of people. Differences in access and quality of care can also lead to health disparities. Assessing whether access and quality of care differ by socio-economic status, gender, ethnic background, or home location (rural or inner city) can help us identify gaps, develop strategies to close these gaps, and monitor improvement. However, we have limited data to allow us to do this and health disparities are not regularly assessed or reported in Ontario.

Health disparities have an important impact on the health system. For example, lower income Canadians are substantially sicker than upper income Canadians and consequently use twice the number of health care services.¹⁸ In 2004 the Health Disparities Task Group of the Federal, Provincial and Territorial Advisory

Facing a mental illness or addiction problem is among the most frightening things people and families have to go through. How much worse would it be if you didn't speak the language well enough to understand what you were being asked or told? Or if the assumptions your doctor had didn't fit your culture at all? The Centre for Addiction and Mental Health knew the answer to that – it would be infinitely worse. So it organized rapid-response 24-hour interpretation services for the 25 languages most commonly spoken by its clients and the population of Toronto overall. (Interpretation in less-common languages is available, too, but may take a little longer to arrive). Interpretation is probably the highest-profile part of the centre's diversity policy, introduced five years ago to transform it into a culturally sensitive organization that would serve all clients equitably. There are other aspects to the policy – including, for example, training health professionals how to be reassuring and welcoming before the interpreter arrives, by showing respect, thinking about body language and trying to make people comfortable. There's training, also, to understand the norms of other cultures – a Muslim woman, for example, will not want to be alone with a male she's not related to, and in some cultures the oldest male is always the family spokesman and clients from that community may not be prepared to speak for themselves. But this is not just a commitment to be welcoming to other cultures. The policy has a formal structure that dictates lines of accountability and includes requirements to track and evaluate all diversity-related activities regularly, and calls for complete reviews every three years ensure the changes the policy brought about are sustained and taken further.

Dunlop S, Coyte PC & McIsaac W. (2000) Socio-economic status and the utilisation of physicians' services: results from the Canadian National Population Health Survey. *Soc Sci Med*; 51(1): 123-33; Kue Young T, Reading J, Elias B & O'Neil JD. (2000) Type 2 diabetes mellitus in Canada's First Nations: status of an epidemic in progress. *CMAJ*; 163(5):561-566; Newbold KB & Danforth J. (2003) Health status and Canada's immigrant population. *Soc Sci Med*; 57 (10): 1981-95.

Health Disparities Task Group of the Federal Provincial Territorial Advisory Committee on Population Health and Health Security. Health Disparities: Roles of the Health Sector. 2004. Found at: http://www.phac-aspc.gc.ca/ph-sp/disparities/pd006/disparities_discussion_paper_e.pdf. Accessed September 23, 2006.

Committee on Population Health and Health Security further noted that approximately 20 percent of health-care spending was due to disparities between different income groups.¹⁰

The health-care system can play an important role in reducing health disparities. We can improve access to the health system through outreach, location, physical design, opening hours and other policies. We can make the system more patient-centred by providing culturally competent care, interpretation services and assisting patients and families overcome social and economic barriers to care. In section 3.9 we discuss how the health sector can co-operate with other sectors to improve population health.

In this section, we look at two groups — Aboriginal Ontarians and those who are new immigrants. Since equity, or fairness, is a factor in all the attributes of a high-performing health system, we wanted to know how easily people from these groups get the care they need, whether that care is addressing their particular health needs and whether services are provided in a way that respects their religious, cultural and language needs. A number of the answers we found are troubling, but we also found some examples of excellent care and best practices that can be more widely used in the province.



3.5.1. Aboriginal Ontarians: how well does the health system perform for them?

ONTARIO'S ABORIGINAL POPULATION

In 2001, 188,315 Ontario residents identified themselves as being of Aboriginal heritage, First Nation, Inuit or Métis, although the actual number is probably higher.¹¹ The majority live in the general population: 61.1 percent are city dwellers, 17.4 percent live in rural areas and 21.5 percent reside in 139 First Nation communities scattered across the province, mostly in the north.¹² Because of higher birthrates, Aboriginal people tend to be younger than the province's population as a whole, with about 46 percent under 25 years of age.

HEALTH OF ABORIGINAL ONTARIANS

Study after study, comparing disease after disease, have found Aboriginal Ontarians have poorer health than the majority of Canadians. Aboriginal people have three to five times the incidence of type 2, or adult-onset diabetes than the Canadian norm, and they develop it at very early ages.¹³ Heart conditions and breathing problems are reported at twice the rate found in the general population.¹⁴ Cross-group studies show Aboriginal people are much more likely to be overweight or obese¹⁵, to have high blood pressure and to smoke, all factors that put their health at greater risk.¹⁶ Data from Ontario's First Nations Regional Health Survey (1997) shows 79 percent of males and 72 percent of females living on reserve report smoking, compared to 30 and 27 percent for the provincial population as a whole.¹⁷ Other studies have documented corresponding higher rates of lung cancer.¹⁸ In addition, Aboriginal individuals suffer more mental-health problems, with higher rates for depression, substance abuse and suicide.¹⁹

Health Disparities Task Group of the Federal Provincial Territorial Advisory Committee on Population Health and Health Security. *Health Disparities: Roles of the Health Sector*. 2004. Found at: http://www.phac-aspc.gc.ca/ph-sp/disparities/pdf06/disparities_discussion_paper_c.pdf. Accessed September 23, 2006.

This number is an underestimation since several reserves or settlements did not participate or were not fully enumerated. If patterns from the 1996 census were repeated, it is also likely that a significant number, both on- and off-reserve, did not self-identify as Aboriginal. Aboriginal population profile, 2001 Census of Canada. Statistics Canada. Found at: <http://www12.statcan.ca/english/profil01/ab/PlaceSearchForm1.cfm>. Accessed August 24, 2006.

Indian and Northern Affairs Canada. List of First Nations: Ontario. Found at: http://psw2-esd2.ainc-inac.gc.ca/FNProfiles/FNProfiles_List.asp?Province1=ON. Accessed September 26, 2006.

Macaulay A, Harris S, Lévesque L, Cargo M, Ford E et al. (2003) Primary prevention of type 2 diabetes: Experiences of two Aboriginal communities in Canada. *Canadian Journal of Diabetes*; 27(4): 464–475.

MacMillan H, Walsh C, Jamieson E, Wong M et al. (2003) The health of Ontario First Nations people. *Canadian Journal of Public Health*; 94(3): 168–172.

Tremblay M, Pénz C, Andersen C, Bryan S & Katzmarzyk P. (2005) Obesity, overweight and ethnicity. *Health Reports*; 16: 23–34.

Anand S, Yusuf S, Jacobs R, Davis A, Yi Q, Gerstein H et al. (2001) Risk factors, atherosclerosis, and cardiovascular disease among Aboriginal people in Canada: The Study of Health Assessment and Risk Evaluation in Aboriginal Peoples (SHARE-AP). *Lancet*; 358: 1147–1153.

Marrett L & Chaudhry M. (2003) Cancer incidence and mortality in Ontario First Nations, 1968–1991 (Canada). *Cancer Causes and Control*; 14: 259–268.

Adelson N. (2005) The embodiment of inequity: health disparities in Aboriginal Canada. *Canadian Journal of Public Health*; 96: S45–S61.

ACCESS TO CARE

We've said people should get the care they need, when they need it, from the right provider in the right place. But, although not a great deal of data is available, what there is shows that's often not the case for Aboriginal Ontarians. Evidence suggests they have trouble getting even basic care because of where they live and problems with who is responsible for providing care.²² Four out of 10 Aboriginal Ontarians live in small towns, rural or remote areas which lack primary-care services.²³ First Nations people with diabetes who reside in remote communities, for example, are three times more likely to have serious complications that might have been avoided if they lived in less isolated communities, with better access to primary care and specialized support, such as dieticians.²⁴

Aboriginal residents who live in isolated areas often have to leave their communities for services that would be considered routine primary and preventive care elsewhere in the province.²⁵ Expectant mothers are transferred out of their home communities to give birth at specialized hospitals and older women from remote communities in the northwest who need mammograms have to fly to a community in the mid-north with road access that can be visited by a breast-screening van. Aboriginal clients are often reluctant to leave home for these services and

it's the same for other programs that cannot be delivered in smaller communities. One person we spoke to said "if there's anything that really impedes getting access to primary care [lack of local resources] is basically it." Although remote health care through telemedicine links is improving all the time, and is widely accepted as one way to overcome some of the barriers to accessing care, not everyone believes this technological approach will solve all the problems of remote access: one speaker warned telemedicine "isn't universally accepted by clients and service providers yet."

Which health-care system Aboriginal people turn to for primary care is partly dictated by jurisdiction — several different levels of government are responsible for delivering care to Aboriginal people. Some care is delivered by Aboriginal-specific federal or provincial service networks; some by the general provincial programs open to everyone. Primary care in remote First Nation communities is delivered by Health Canada, through community health centres or nursing stations,²⁶ where registered nurses, most of whom have extra training to do more independently, work with visiting physicians and other care providers.²⁷ The parts of the province where services are managed by Aboriginal health authorities have similar arrangements with outside specialists.



Frohlich K, Ross N & Richmond C. (2006) Health disparities in Canada today: some evidence and a theoretical framework. *Health Policy*, 79 (2-3): 132-143.

Aboriginal population profile: 2001 Census of Canada. Statistics Canada. Found at: <http://www12.statcan.ca/english/profil01/ab/PlaceSearchForm1.cfm>. Accessed: August 24, 2006.

Booth G, Hus J, Fang J & Chan B. (2005) Time trends and geographic disparities in acute complications of diabetes in Ontario, Canada. *Diabetes Care*, 28(5): 1045-1050.

Certain circumstances: Issues in equality and responsiveness in access to health care in Canada. Health Canada. Found at: http://www.hc-sc.gc.ca/hcs-wa/pubs/care-sims/2001-certain-equit-acces/part3-tc-tm_c.html. Accessed: September 6, 2006.

Smith D. (2003) Maternal-child health care in Aboriginal communities. *Canadian Journal of Nursing Research*, 35 (2): 143-152.

Minore B, Boone M & Hill M. (2004) Finding temporary relief: strategy for nursing recruitment in northern Aboriginal communities. *Canadian Journal of Nursing Research*, 36 (2): 148-163.



The remainder of Aboriginal Ontarians use general primary care services or Aboriginal-specific primary care, such as the Aboriginal Health Access Centres or Aboriginal Community Health Centres. All these levels of care don't mean there's always the care people need, but there are some signs of increased collaboration and co-operation among the jurisdictions, including the federal transfer of First Nations health-care systems to Aboriginal communities and integration of federal and provincial services in Sioux Lookout and Weeneebayko Health Ahtuskaywin (which provides health care for Aboriginal people on the west coast of James Bay).

PATIENT-CENTRED

In health-system terms, safety generally means protection from physical harm caused by care. But Aboriginal Ontarians may face risks because of a failure on the part of the health-care system to provide care that is culturally acceptable, or "culturally safe."²⁶ Aboriginal people who are not comfortable communicating in English or French, for example, may face delays or disruptions in care and have more trouble following instructions they do not fully understand.²⁷

Language barriers are a particular problem for those treated away from home where translators may not always be available. Weeneebayko Health Ahtuskaywin for example, sends "1,600 people a year down to Timmins [and] 2,200 people a year down to Kingston, so we need translators."²⁸

Language aside, the failure of caregivers to understand social and cultural differences leads to dissatisfaction among Aboriginal clients, who then tend not to follow plans for their care and don't do as well as a result.²⁹ It may be due to the mainstream's failure to recognize Aboriginal people's strong belief in holistic care that Aboriginal Canadians aren't as good at getting the care they need and are more intimidated by the health-care system.³⁰ The system's failure to appreciate that Aboriginal clients make decisions by consensus, involving family and other community members in their care, may cause tension, miscommunication and interrupt care.³¹ Reluctance to acknowledge intergenerational issues, including the effects of residential schools, may also disrupt care for Aboriginal clients.³²

APPROPRIATELY RESOURCED

Considering all these barriers to care, we are concerned there are not more resources to support appropriate care for Aboriginal Ontarians.³³ One major problem is the lack of Aboriginal health professionals and limited enthusiasm among professionals for working in rural or Aboriginal communities.³⁴ However, some schools of nursing³⁵ and medicine³⁶ are developing Aboriginal-specific recruitment and training. The Northern Ontario School of Medicine³⁷ and Ontario's Nurse Practitioner program³⁸ are committed to recruiting Aboriginal students and integrating indigenous health

Vukic A & Keddy B. (2002) Northern nursing practice in a primary health care setting. *Journal of Advanced Nursing*, 40: 542-548.

Taylor S & Laurie N. (2004) The role of culturally competent communication in reducing ethnic and racial healthcare disparities. *The American Journal of Managed Care*, 10: 1-4.

Moffatt M & Cook C. (2005) How can the health community foster and promote the health of Aboriginal children and youth? *Pediatric Child Health*, 10(9): 549-552.

Domini-Lenhoff F & Hedrick H. (2000) Increasing awareness and implementation of cultural competence principles in health professions education. *Journal of Allied Health*, 29(4): 241-245.

Dodgson J & Struthers R. (2006) Indigenous women's voices: Marginalization and health. *Journal of Transcultural Nursing*, 16(4): 330-346.

Smith D, Varcoe C & Edwards N. (2005) Turning round the intergenerational impact of residential schools on Aboriginal people: implications for health policy and practice. *Canadian Journal of Nursing Research*, 37: 38-60.

Shah B, Gunraj N & Hux J. (2003) Markers of access to and quality of primary care for Aboriginal people in Ontario, Canada. *American Journal of Public Health*, 93 (5): 798-802.

Elman A. (2004) Lack of Aboriginal health professionals a 'huge issue'. *Canadian Medical Association Journal*, 171(9): 1028.

Gregory D. (2005) Aboriginal health and nursing research: Postcolonial theoretical perspectives. *Canadian Journal of Nursing Research*, 37(4): 11-15(5).

Spencer A, Young T, Williams S & Horsfall S. (2005) Survey on Aboriginal issues within Canadian medical programmes. *Medical Education*, 39: 1101-09.

Rourke J. (2002) Building the new Northern Ontario Rural Medical School. *Australian Journal of Rural Health*, 10: 112-116.

Boone M & Minor B. Integrated or separated: Teaching concepts of Aboriginal health to nurse practitioners: 483-494, in H. Myrland & L. Carlson (Eds.), *Circumpolar Change: Building a Future on Experiences From the Past*. Proceedings from the Fifth Circumpolar Universities Cooperation Conference, Lulea University of Technology, Sweden, 1999.

into their programs. The Northern medical school offers training programs in Aboriginal settings because first-hand exposure to the challenges and rewards of practice there may encourage students to return when they graduate.

There are serious concerns that health-care organizations do not have the money or time to foster culturally appropriate care and where they do, their idea of what's appropriate may not accord with Aboriginal thought.⁴⁰ One person observed: "A lot of times non-Aboriginal programs, even ones that purport to be culturally sensitive, aren't necessarily [so]." Attitudes are changing, however, with new legislative, regulatory, and accreditation requirements that require the introduction of culturally-appropriate programs and practices.⁴¹ The College of Nurses of Ontario's standard for nurse-client relationships says nurses must establish relationships with their clients that respect the "needs, wishes, knowledge, experience, values and beliefs" of clients and their families.⁴²

While there is evidence that transferring health services resources to Aboriginal organizations improves care,⁴³ the effects are limited if programs are short-term or inflexible.⁴⁴ They don't work, for example, if they ignore the socio-economic or historical conditions that partially determine the health of Aboriginal peoples.⁴⁵ At the same time, programs such as Ontario's Aboriginal Health Access Centres are successful because they address individuals' situations and take into account factors "like historical trauma and residential-school syndrome."

FOCUSED ON POPULATION HEALTH

Health systems are not just for treating sickness; they also have to prevent illness. Aboriginal health systems in Ontario have elements of both, but not always in balance. Although the province's Aboriginal Healing and Wellness Strategy is designed to make sure "prevention and population health... are pretty much built into almost everything," access to other preventive programs, such as the Aboriginal diabetes, HIV/AIDS or tobacco strategies, varies considerably. There are also imbalances in health promotion and prevention programs sponsored by Health Canada: in the north, the overwhelming need for primary care restricts resources available for public health.⁴⁶

There are many proposals for promoting good health to fight specific conditions like diabetes⁴⁷ or obesity.⁴⁸ But reviews of numerous initiatives show that to succeed, health promotion activities must be directed by the community, to modify behaviour in its own environment and context.⁴⁹ That requires lay knowledge⁵⁰ to shape programs on a community-by-community basis.⁵¹



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- Ahmann E. (2002) Developing cultural competence in health care settings. *Pediatric Nursing* 28(2): 133 - 137.
- Practice standard: Therapeutic nurse-client relationship (2006) College of Nurses of Ontario: p. 15.
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LOOKING TO THE FUTURE



There is some good news in health care for Aboriginal Ontarians.

The Aboriginal Healing and Wellness Strategy has strengthened the role of the province in providing inclusive, holistic, and culturally specific care to Aboriginal people. There is more collaboration among First Nation, provincial and federal governments to develop policies and programs for specialized needs. Most important is the increasing presence of Aboriginal people as decision makers and health-care providers who can deliver care people are comfortable with. As an

interviewee said, "Aboriginal people have a particular way of looking at health. They look at it on a very holistic basis. It's not just services from a physician or a nurse, or the drugs. It's treating the physical, emotional, spiritual and mental aspects of people."

3.5.2 Equity for new Canadians

ONTARIO'S IMMIGRANT POPULATION

Canada has always been home to large numbers of immigrants. In 2001, nearly one in five Canadians were born in another country, the highest level in 70 years — and 55 percent of all the immigrants who came to Canada in the ten years before 2001 moved to Ontario. Ontario's major metropolitan areas all have significant numbers of new Canadians — in 2001, 44 percent of Toronto's residents were born outside of

Canada, as were 21 percent of residents in Waterloo Region and the City of London, 22 percent in Ottawa, 25 percent in Hamilton, and 27 percent in Windsor.³¹

The face of immigration has changed dramatically in the last 40 years, when most newcomers had European ethnic backgrounds. Now, the majority are non-European.³² In 1971, less than five percent of residents in the greater Toronto area had origins outside Europe. By 2001, 40 percent of Torontonians claimed non-European heritage.

However, Canada's recent immigrants have higher rates of poverty after arriving³³ than previous generations. In general, immigrants are more likely to work in low-paying jobs, less likely to be employed and more likely to live in poverty.³⁴ Many immigrants are very well educated but have difficulty finding jobs that fit their training.³⁵ As a result, in 2001 only 10 percent of Torontonians of European heritage were poor, but 40 percent of those of African origin and 30 percent of Arabs and West Asians were poor.³⁶

These are important points when studying the health challenges facing immigrants. In section 3.9, we note that poor people are much more likely to have bad health, although many factors that affect health are intertwined with poverty. In a 2003 report on racial and ethnic disparities in health care in the U.S., the Institute of Medicine found that racial and ethnic discrimination was one of many factors that contributed to health disparities in that country. The report said, "To a great extent, attempts to separate the relative contribution of these factors risks presenting an incomplete picture of the complex interrelationship between racial and ethnic minority status, socioeconomic differences, and discrimination..."³⁷ We need more information about how these factors work together to cause disparities.

³¹ All data on the immigration status of different Ontario cities is from Statistics Canada Community profiles. Found at: <http://www12.statcan.ca/english/profil01/CP01/Index.cfm?Lang=E>. Accessed: October 27, 2006.

³² Ornstein M. Ethno-racial groups in Toronto, 1971-2001: A demographic and socio-economic profile. Institute for Social Research - York University. Found at: http://atwork.settlement.org/sys/atwork_library_detail.asp?passed_lang=EN&doc_id=1004044. Accessed: July 12, 2006.

³³ Ng E, Wilkins R, Gendron F et al. (2005) Dynamics of Immigrants' Health in Canada: Evidence from the National Population Health Survey. Statistics Canada.

³⁴ Picot G & Sweetman A. The deteriorating economic welfare of immigrants and possible causes: Update 2005. Found at: <http://www.statcan.ca/english/research/11F0019MIE/11F0019MIE2005262.pdf>. Accessed: October 27, 2006.

³⁵ There are important differences within these groups. For example, Portuguese and Bangladeshis are much more likely to live in poverty than other Europeans or South Asians respectively; Ornstein M. Ethno-racial groups in Toronto, 1971-2001: A demographic and socio-economic profile. Institute for Social Research - York University. Found at: http://www.isr.yorku.ca/download/Ornstein-Ethno-Racial_Groups_in_Toronto_1971-2001.pdf. Accessed: July 12, 2006; Using Statistics Canada's low-income cut-off measure or LICO. See: Low income cut-offs for 2004. Found at: <http://www.statcan.ca/english/research/75F0002MIE/75F0002MIE2005003.pdf>. Accessed: October 26, 2006; Using Statistics Canada's low-income cut-off measure or LICO. See: low income cut-offs for 2004. Found at: <http://www.statcan.ca/english/research/75F0002MIE/75F0002MIE2005003.pdf>. Accessed: October 26, 2006.

³⁶ Smedley BD, Smith AY & Nelson AR (Eds) (2003). Unequal Treatment: Confronting racial and ethnic disparities in health care. Washington DC: The National Academies Press.

³⁷ Smedley BD, Smith AY & Nelson AR (Eds) (2003). Unequal Treatment: Confronting racial and ethnic disparities in health care. Washington DC: The National Academies Press.

HEALTH STATUS OF IMMIGRANTS

Historically, immigrants arrived with better health than non-immigrants,¹⁰⁷ partly because you had to be healthy to contemplate uprooting and moving to a new country and partly because most immigrants are screened to ensure they're healthy and not infected with tuberculosis or sexually transmitted diseases.¹⁰⁸ According to a recent National Population Health Survey,¹⁰⁹ 97 percent of new immigrants rated their health as good, very good or excellent six months after their arrival, compared with 88 percent of the general population.

However as time passes, the health status of immigrants converges with the general population. During the time of the survey, from 1994/95 to 2002/03, immigrants in general were more likely than the Canadian-born population to report a shift towards fair or poor health. Recent immigrants, from non-European countries in particular, were twice as likely as the Canadian-born to report deterioration in their health during the study period. According to the survey, this deterioration in health was caused by many factors including household income, adopting unhealthy behaviour (such as poor eating that leads to weight gain),¹¹⁰ increased stress, inadequate employment opportunities, housing conditions and discrimination.¹¹¹

Some new Canadians are more likely to develop illnesses after their arrival to Canada. South Asians

and Latin Americans are at higher risk of developing type 2 diabetes.¹¹²

ACCESS TO HEALTH CARE

Almost no routine data is collected on the ethno-cultural background of Ontario patients. What we know about access to health care for immigrants in Canada is based on surveys.

Ontario's ongoing Primary Care Access Survey¹¹³ found:

- Canadian-born Ontarians and immigrants who have been in Canada for five years or more are significantly more likely to have a regular doctor (92.1 percent) compared to newer immigrants who have been here for less than five years (73 percent).
- Non-white Ontarians are slightly less likely to have a doctor than white Ontarians (88.7 percent versus 92.4 percent whites).
- There is no significant difference in whether those who speak English or French have a regular doctor compared to those who speak other languages.

Apart from the Primary Care Access Survey there is little data on access to health services by Ontario immigrants or visible minorities. We were able to find that:



¹⁰⁷ Immigration and Refugee Protection Act 2001, c. 27.

¹⁰⁸ High levels of weight gain is one example cited in the study.

¹⁰⁹ Ng E, Wilkins R, Gendron F et al. Dynamics of Immigrants' health in Canada: Evidence from the National Population Health Survey. *Statistics Canada* 2005.

¹¹⁰ Tan C, Emmanuel SC, Tan B et al. (1999) Prevalence of diabetes and ethnic differences in cardiovascular risk factors. *The 1992 Singapore national health survey*; 22: 241-247; Lanting IC, Joung IMA, Mackenbach JP et al. (2005) Ethnic differences in mortality, end-stage complications, and quality of care among diabetic patients. *Diabetes Care* 28: 2280-2288; Carnethion MR, Bertoni AG, Shea S et al. (2005) Racial/ethnic differences in subclinical atherosclerosis among adults with diabetes: The multiethnic study of atherosclerosis. *Diabetes Care* 28: 2768-2770.

¹¹¹ Primary Care Access Survey began in 2006. Results from this survey are also presented in section 3.1.1.



- Recent immigrants and visible minorities in Ontario use fewer preventive services.¹⁰¹
- Visible minorities are half as likely as other Canadians to consult a health professional if depressed.¹⁰²
- Recent immigrants are nearly two-and-a-half times more likely to report difficulty accessing urgent care for minor problems.¹⁰³ This situation tends to improve after five-to-10 years in Canada.¹⁰⁴
- Immigrants are more likely to say they have unmet health-care needs.¹⁰⁵
- Immigrants are more likely to express concerns about the quality of health care they receive.¹⁰⁶ It is not clear if the services are worse or just thought to be.

These data tell us we need to take fast action to help new Canadians link with the health system, to help them get the care they need.

Very new immigrants who have been in Canada for less than three months face an additional barrier. Ontario is one of only four provinces that make newcomers wait three months for provincial health coverage.¹⁰⁷ During the wait, immigrants and refugees are eligible for coverage from the Interim Federal Health Program,¹⁰⁸ but it mainly covers emergency care for serious conditions, not routine care.

In addition to immigrants who are in the three month waiting period, there are likely between 50,000 and 200,000 people in Canada without full legal status — and approximately half live in Toronto.¹⁰⁹ Some care is provided for non-insured patients through Ontario's Community Health Centres (CHCs) and at least one hospital. CHCs provide free care to non-insured patients and have small budgets to pay for outside services such as lab, imaging, specialty and hospital care. But they report being overwhelmed with the demand and often have to make hard choices about who will get care.¹¹⁰ The Scarborough Hospital established a free clinic for immigrants and refugees in 2000.¹¹¹ The clinic has had 7,000 visits by 2,000 patients from 85 different countries; one-third of them were seeking care during their three-month wait for OHIP. Almost 90 percent were approved immigrants or awaiting determination of their status.

PATIENT-CENTRED

The phrase "patient-centred care" means care that's sensitive to individual needs and preferences. Recent immigrants and people from non-European cultures may have trouble getting care if their cultural values differ from the dominant culture of the health system.¹¹² Different cultural approaches to illness by patients and practitioners can lead to confusion over its origins, its description and appropriate treatment.¹¹³

¹⁰¹ Glazier HR, Tepper J, Agha MM et al. Primary care in disadvantaged populations. Chapter 8 in: Jaakkimainen L, Upshur R, Schultz S, et al. Primary Care in Ontario. Institute for Clinical Evaluative Sciences, August 2006. Found at: http://www.ices.on.ca/webpage.cfm?site_id=1&org_id=67&morg_id=0&sec_id=0&item_id=3655&type=atlas. Accessed: September 9, 2006.

¹⁰² Lasser KE, Himmelstein DU, Woolhandler S. (2006) Access to care, health status, and health disparities in the United States and Canada: Results of a cross-national population-based survey. *American Journal of Public Health* 96: 1300-1307.

¹⁰³ Sanmartin C & Ross N. (2006) Experiencing difficulties accessing first-contact health services in Canada. *Healthcare Policy* 1(2): 103-119.

¹⁰⁴ Ieduc N & Proulx M. (2004) Patterns of health services utilization by recent immigrants. *Journal of Immigrant Health* 6: 15-27.

¹⁰⁵ Wu Z, Penning MJ & Schimlele CM. (2005) Immigrant status and unmet health care needs. *Can J of Public Health* 96: 369-373.

¹⁰⁶ Lasser KE, Himmelstein DU, Woolhandler S. (2006) Access to care, health status, and health disparities in the United States and Canada: Results of a cross-national population-based survey. *American Journal of Public Health* 96: 1300-1307.

¹⁰⁷ British Columbia and New Brunswick also have three-month waits. Quebec does, too, but it can be waived on request with proof of need.

¹⁰⁸ Right to Health Care Action Coalition. Policy paper on the 3-month wait for OHIP – Ministry of Citizenship and Immigration, September 2006. Found at: <http://www.cic.gc.ca/english/newcomer/welcome/wel-06e.html>. Accessed: November 13, 2006.

¹⁰⁹ Ministry of Citizenship and Immigration. Found at: <http://www.cic.gc.ca/english/applications/guides/5568ETO.html>. Accessed November 11, 2006.

¹¹⁰ Ontario Council of Agencies Serving Immigrants. The regularization of non-status immigrants in Canada 1960-2004: Past policies, current perspectives, active campaigns. Found at: http://www.ocas.org/STATUS/Regularization_booklet.pdf. Accessed: September 23, 2006.

¹¹¹ Women's Health in Women's Hands Community Health Centre, Davenport Perth Community Health Centre, Rexdale Community Health Centre, personal communication, October 2006.

¹¹² Caulford P & Vali P. (2006) Providing health care to medically uninsured immigrants and refugees. *Canadian Medical Association Journal* 174: 1253-1254.

Lack of language skills is another serious barrier to health services.¹¹⁷ The percentage of Canadians whose mother tongue is neither English nor French is projected to increase from 17 percent in 2001 to between 21 and 25 percent in 2017.¹¹⁸ When patients and providers don't speak the same language, misdiagnosis can result, or patients may get less care.¹¹⁹ Sometimes, interpretation is provided by government agencies or community organizations but health-care institutions often rely on non-professional interpreters such as hospital staff or family members,¹²⁰ which can compromise patient privacy and may mean people withhold personal health information.

Members of different ethno-cultural communities told us getting care from someone who speaks their language and understands their culture improves its quality. For example, recent immigrants with diabetes can manage their disease better if they understand which of their customary foods should be avoided. Many foreign-trained health professionals have immigrated to Canada and could greatly benefit members of their ethnic communities if they were able to work in health care, but they often find their credentials are not recognized here.¹²¹ However, that situation is improving. In both 2005 and 2006, the College of Physicians and Surgeons of Ontario licensed more internationally trained medical graduates than Canadian medical graduates.¹²² The greatest number of licenses went to people from India, Egypt, the U.K., South Africa and Pakistan.¹²³

There are other positive steps toward developing programs that are designed for people from different cultural and ethnic backgrounds. The Centre for Addiction and Mental Health's work is profiled at the beginning of section 3.5, and that of Access Alliance

Multicultural Community Health Centre appears below. Another outstanding program — London InterCommunity Health Centre's Latin American Diabetes Program — is profiled in section 5.2.2.

The Chronic Care Model, described in section 5.2, is used to identify opportunities to improve management of chronic conditions. It can also be used to identify barriers and enablers to access for ethno-cultural populations and other vulnerable groups. The goal of the chronic care model is productive interactions between an informed activated patient (and family) and a prepared proactive practice team, and recognizes the influence of factors related to the patient and their family, the health-care system, and the community.



Oxman-Martinez J & Hanley J. Health and services for Canada's multicultural population: challenges to equity. Canada Citizenship and Immigration. In: Serving Canada's multicultural population for the future. Discussion papers, 2005. Found at: http://www.pch.gc.ca/multi/canada2017/PDFs/document_e.pdf. Accessed: November 20, 2006.

Anderson, J. M. (1986) Ethnicity and illness experience: Ideological structures and the health care delivery system. *Social Science & Medicine*, 22: 1277-83; Oxman-Martinez J, Hanley J. Health and services for Canada's multicultural population: challenges to equity. Canada Citizenship and Immigration 2004. Found at: http://www.pch.gc.ca/progs/multi/canada2017/4_e.cfm. Accessed: November 20, 2006.

Oxman-Martinez J & Hanley J. Health and services for Canada's multicultural population: challenges to equity. Canada Citizenship and Immigration. In: Serving Canada's multicultural population for the future. Discussion papers, 2005. Found at: http://www.pch.gc.ca/multi/canada2017/PDFs/document_e.pdf. Accessed: November 20, 2006.

Population Projections of Visible Minority Groups, Canada, Provinces and Regions, 2001-2017- Catalogue no 91-541-XIE, Statistics Canada, 2005.

Oxman-Martinez J & Hanley J. Health and services for Canada's multicultural population: challenges to equity. Canada Citizenship and Immigration. In: Serving Canada's multicultural population for the future. Discussion papers, 2005. Found at: http://www.pch.gc.ca/multi/canada2017/PDFs/document_e.pdf. Accessed: November 20, 2006; Smedley BD, Stith AY & Nelson AR eds (2003). *Unequal Treatment: Confronting racial and ethnic disparities in health care*. Washington DC, The National Academies Press.

Weerasinghe S & Williams LS Health and the intersections of diversity: A challenge paper on selected program, policy and research issues. Paper presented at the Intersections of Diversity Seminar, Niagara Falls, Canada - 2003.

Ornstein M. Ethno-racial groups in Toronto, 1971-2001: A demographic and socio-economic profile. Institute for Social Research - York University, 2006. Found at: http://www.isr.yorku.ca/download/Ornstein-Ethno-Racial_Groups_in_Toronto_1971-2001.pdf. Accessed: July 12, 2006.

"College issuing most licenses in two decades." Found at: www.cpsso.on.ca. Accessed December 14, 2006.

CPSO Registration Statistics, 2005. Found at: www.cpsso.on.ca. Accessed December 14, 2006.

Toronto's Access Alliance Community Health Centre works with high-need communities, particularly new immigrants and refugees. Access Alliance programs use and build on existing community services and neighbourhood networks. These networks, along with local and ethnic media, are used to recruit and hire peer outreach workers – many have university educations and some are trained health professionals. Outreach workers are paid for three months of training and then are offered three-year contracts; 80 percent secure employment elsewhere after their work with the centre. Local social service providers provide a base for the outreach workers. The centre and the outreach workers identify the gaps in the community and then work with local resources to fill them. The outreach workers and staff from the centre can deliver up to 20 education programs, including six on parenting. They also help with child and women clinics which are run by a nurse practitioner and dietitians in the community. Program participants come through local agencies and directly from the target community. The outreach workers canvass community organizations and contact potential clients in local settings such as libraries, places of worship, and shopping malls. The outreach workers also provide information and referrals to culturally appropriate services, interpretation, and accompaniment to appointments with health and social service workers.

DEVELOPING CULTURALLY COMPETENT CARE

Culturally competent care means agencies and professionals work effectively in cross-cultural situations, according to American researchers Brach and Fraser. They say there are nine "cultural competencies" health organizations should have: interpretation services, recruitment and retention policies, training, co-ordinating with traditional healers, use of community health workers, culturally competent health promotion, including family/community members, immersion into another culture and administrative and organizational accommodation.¹² Brach and Fraser say culturally competent care improves the quality of care and therefore its economic sustainability.¹³ A recent U.S. study showed health-care organizations with the highest cultural competence scores were six times as likely to provide high-quality asthma care for children as practices with the lowest cultural competence.¹⁴

The United States Office for Minority Health has set national standards for cultural competence. Health organizations receiving federal funding must have culturally appropriate interpretation services, signage, and patient materials for clients.¹⁵ The office has also recommended standards for federal, state, and national accreditation bodies to add to their assessments. The Canadian Council on Health Services Accreditation says there is a need to include different population groups in planning services and respecting and empowering patients. Community Organizational Health Inc., which does accreditation for Ontario's community health centres, says healthy organizations don't let ethnicity, race, and other factors become barriers to service¹⁶ but neither provides more explicit details on what cultural competence is.

Brach C. & Fraser L. (2000) Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model. *Medical Care Research and Review* 57(1): 181-217.

Brach C. & Fraser L. (2002) Reducing disparities through culturally competent health care: An analysis of the business case. *Quality Management in Health Care* 10(4): 15-28.

Lieu TA, Finkelstein JA, Lozano P et al. (2004) Cultural competence policies and other predictors of asthma care quality for medicaid-insured children. *Pediatrics* 114: e102-e110. Found at: <http://pediatrics.aappublications.org/cgi/content/full/114/1/e102>. Accessed: October 12, 2006.

National Standards on Culturally and Linguistically Appropriate Services (CLAS). US Office of Minority Health. Found at: <http://www.omhrc.gov/templates/browse.aspx?lvl=2&lvlID=15>. Accessed: October 19, 2006.

Building Healthier Organizations Manual 2005. Community Organizational Health Inc. Found at: <http://cohi-soci.ca/>.

LOOKING TO THE FUTURE

Equity seems to be gaining priority in the Ontario health system. The Ministry of Health and Long-Term Care released draft strategic directions in June 2006.¹⁰⁷ Two of its goals relate to equity — one refers to “improving the health of all Ontarians, especially groups with the poorest health status,” while the other says “Ontarians will have equitable access to the care and services they need no matter where they live or their socio/ cultural/ economic status.”

We are encouraged to see attention given to this issue in the service plans Ontario’s 14 local integrated health networks (LHINs) have written. The first service plans were published in November 2006 and two networks with particularly high proportions of new immigrants have identified diversity as key to changing their systems. The Central LHIN, which has the highest proportion of immigrants of any in Ontario,¹⁰⁸ will develop a diversity planning and implementation advisory group. The Central West LHIN¹⁰⁹ identifies responsiveness to cultural diversity as one of three cross-cutting priorities affecting all services.

3.6 EFFICIENT

“The health system should continually look for ways to reduce waste, including waste of supplies, equipment, time, ideas and information.”

Health care is expensive and no one wants to waste money that could be making people healthier. When we talk about efficiency in health care, we mean all the ways in which each hospital, long-term care home, community health centre or other health-care organization might be able to accomplish more with what they have. This includes using all assets to their full potential, including information, which is often underused. For now, we have chosen two measures for insights into how an efficient system might perform and compared them to actual performance. These two measures — emergency care and keeping people in acute-care hospitals longer than necessary — focus on inappropriate use of hospital resources and how better integration in health care could make the system more efficient.



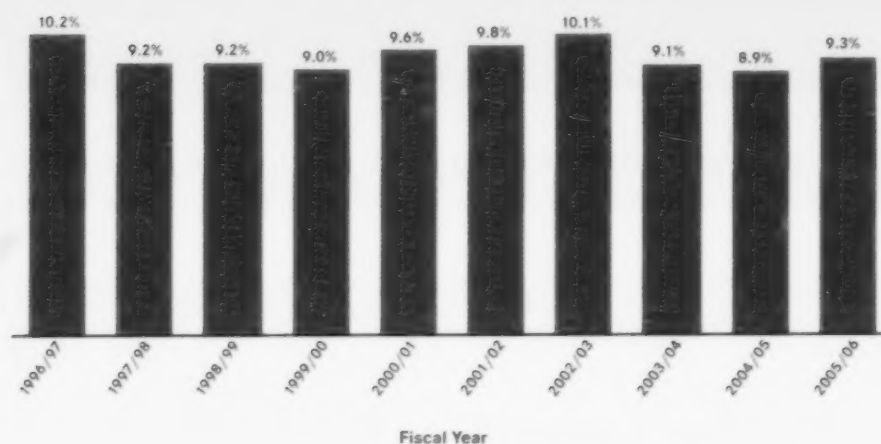
Smitherman G. Draft Ministry of Health and Long-Term Care strategic directions, June 29, 2006. Found at:

http://www.health.gov.on.ca/english/public/updates/archives/hu_06/hu_lhin_letter_062906.pdf. Accessed: October 29, 2006.

Central LHIN includes a northern section of the City of Toronto, most of York Region, and part of south Simcoe County. Forty-six percent of its residents are immigrants and 37 percent are visible minorities.

Central West LHIN includes all of Dufferin County, the northern portion of Peel Region, parts of north-western Toronto, and south-west York Region. Forty percent of its residents are visible minorities, with higher rates in urban parts of the LHIN.

Alternate Level of Care Days in Ontario Hospitals, 1996/97 to 2005/06



Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2006. Data derived from the Provincial Health Planning Database (Version 16.10) (MOHLETC), and the Discharge Abstract Database (CIHI).

Hospitals are complex and expensive organizations and their emergency departments are primarily intended to treat urgent, life-threatening conditions that can't be treated elsewhere. Community-care organizations and long-term care homes use fewer resources and tend to be less expensive. To be most efficient, the health system should treat patients for minor ailments in community care and primary care rather than emergency departments. It's just as important that hospitals be able to discharge patients to care in the community or in chronic or long-term care as soon as they're ready, rather than have them stay in expensive acute-care hospital beds when they don't need high-level care. Both of these strategies would save costs to the health system as a whole.

The time patients spend in acute-care hospital beds when they no longer need that level of care is called "alternate level of care days." If we had a properly integrated system where a bed with the right level of care was always available, there would be no use of hospital beds by patients who were ready for alternate care. Hospital beds, and the physical and human resources they need, would all be used most efficiently.

Cutting the number of hospital days used for alternate levels of care has been a priority for the

health system for at least a decade but, as our chart shows, the percentage has remained relatively constant at between nine and 10 percent since 1996/97. That means close to 10 percent of hospital beds in Ontario are being used for people who don't require such a high level of care. Ontario has added 19,000 long-term care beds in the past five years, but sometimes the only available beds are far from the patient who is in need. Part of the challenge in finding a solution is that hospitals don't report what level of service patients waiting for alternative care need, which makes it difficult to determine the best way to end this waste of hospital resources.

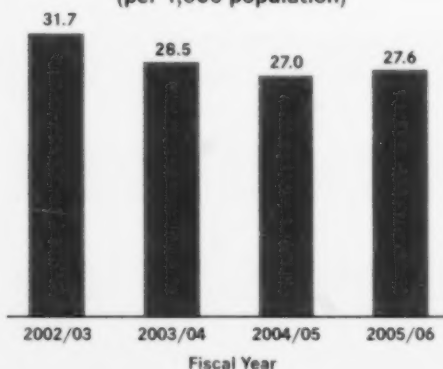
Emergency departments are supposed to serve people who are in urgent need of care but many people visit emergency for less serious conditions. A recent study in Ontario found that less-serious patients don't increase waiting times for more seriously ill patients,¹³ but it would be better for them to be cared for in the community rather than hospital. To measure emergency department efficiency we looked at a few conditions where it's highly likely most cases could have been treated by primary care providers in the community. These included people with ear and eye infections and chest colds.

The definition of Alternate Level Care (ALC) is not used consistently across all hospitals. Many health-care providers report there is confusion as to when a patient 'officially' begins the post-acute phase and becomes ALC, resulting in over or under estimates of ALC rates. This graph does not include newborns.

Schull M, Kiss A & Szalai J-P. (2006) The effect of low-complexity patients on emergency department waiting times. *Ann Emerg Med*. epub (ahead of printing). Found at: http://www.ices.on.ca/webpage.cfm?site_id=1&org_id=77&item_id=3838&morg_id=0&gscc_id=3838

No one wants to spend more time in hospital than they have to. So Grey Bruce Health Services set out to cut the number of days people were spending in expensive hospital care when they could be as effectively and more efficiently looked after somewhere else — usually, a long-term care facility. The hospital worked with the Grey-Bruce Community Access Centre to improve the processes and communication between the two organizations. Hospital staff felt the forms they had to fill out to move patients into care homes were too complicated, and that the Community Care Access Centre was taking too long to find people new homes. CCAC staff felt the CCAC referral forms weren't properly filled out by hospital staff and patients weren't being talked to about what a move to long-term care would mean for them. A collaborative team tackled the problem on several fronts. They created a pamphlet for patients and their families about moving to long-term care and an information package for hospital staff on working with patients making the transition to long-term care. New streamlined forms were prepared and there were educational sessions on the new tools and processes for both hospital and Community Care Access Centre staff. As a result, an average of two days has been cut from the wait patients face before they can leave hospital to go to a long-term care facility.

**Select Emergency Department Visits that
Could be Managed Elsewhere,
2002/03 to 2005/06
(per 1,000 population)**



Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2006. Data derived from the National Ambulatory Care Reporting System (NACRS) and the Provincial Health Planning Database (MOHLTC).

We found that about 28 visits per 1,000 — or 2.8 percent — were for non-urgent conditions that could be treated in primary care and could have been avoided. That number has remained relatively constant for the last two years. Realistically, we won't get this number down to zero because there will always be instances where emergency departments provide access to non-urgent services. For example, in rural areas, some physicians practice from the emergency department and there aren't many other places for people to get care. The quality council believes that family health teams and other primary-care reforms will provide alternative after-hours care so fewer people will use emergency departments for treatment of minor ailments. Already we see that the number of patient visits to their doctors outside of regular office hours rose from 750,000 in August 2004 to 5 million in August 2006.¹⁰

Persons less than one year of age or older than 74 years of age; those admitted to the hospital upon arrival to the emergency room department; people with a *Canadian Emergency Department Triage and Acuity Scale* (CTAS) of levels I, II, or III (resuscitation, emergent, or urgent) were excluded. Conditions include: *Oritis Media*, *Cystitis*, *Conjunctivitis*, upper respiratory infections. Conditions selected for this indicator are considered common high-volume conditions.

Health Results Team - Second Annual Report 2005-2006, Ministry of Health and Long-Term Care, October 2006.

3.7 APPROPRIATELY RESOURCED

"The health system should have enough qualified providers, funding, information, equipment, supplies and facilities to look after people's health needs."

To perform well, a health system must have both the right amount and the right mix of resources. We looked at three categories especially critical to high-quality care:

- Financial resources;
- Human resources; and
- Information management resources.

3.7.1 Financial resources

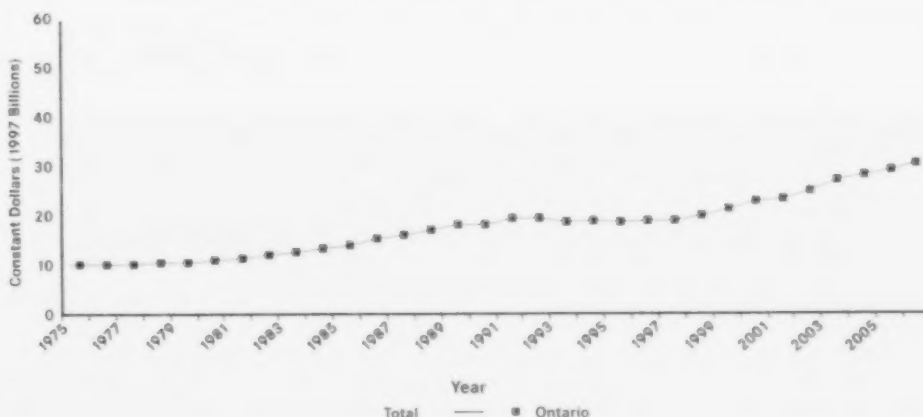
It is relatively easy to examine how much we spend on health care in Ontario, how fast spending is growing, what we spend money on and how our spending compares to other provinces. It is much harder to assess the value we receive for our money. Spending by all sources — provincial, federal and municipal governments, private insurance and

individuals — was expected to be \$60.4 billion¹⁰ in 2006. The provincial government covers the largest share of that, \$37 billion, or more than 60 cents of every dollar spent on health care.

\$60 billion amounts to \$4,700 for every person in Ontario. Health-care spending has grown by an average of about three percent a year in real terms over the past three decades (higher than the rate of inflation), but recently the real growth rate has been higher than that. Health care is increasing as a proportion of total government spending, but is not taking a larger proportion of the overall economy, or gross domestic product. Health care is the top expense for provincial governments in Canada. In 2005, health-care spending was 44.1 percent of all Ontario government program spending, the highest proportion of all the provinces.¹¹ The following graph shows total, inflation-adjusted spending and provincial government health expenditures from 1975 to 2006. The figures are in 1997 dollars.

In Ontario, the largest proportion of provincial government health spending goes to hospitals (38 percent), followed by physicians (23 percent). The hospital share has been declining for decades; before 1985 it was over half the provincial health-care

Annual Total Expenditure on Health and Ontario Government Expenditure on Health, 1975-2006, Constant Dollars, 1997 (Billions)

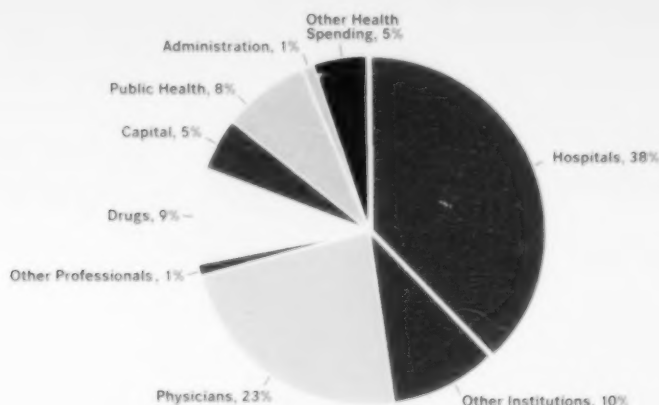


Source: National Health Expenditure Trends: 1975-2006, Canadian Institute for Health Information, 2006.

¹⁰ Health care spending is defined by CIHI as "any type of expenditure for which the primary objective is to improve, or prevent the deterioration of, health status." National health expenditures are reported based on the principle of responsibility for payment rather than on the source of the funds. For example, federal health transfers to the provinces are included in the provincial government sector since it is the responsibility of provincial governments to spend the federal transfers on health services.

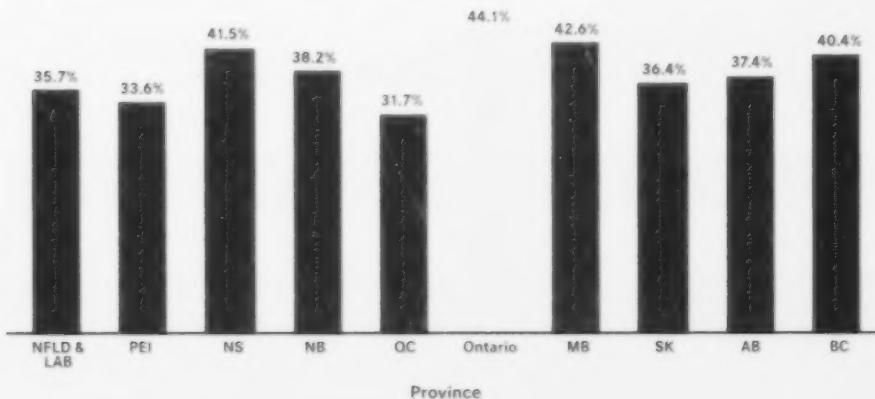
Ontario government health care spending includes: all expenditures by the Ministry of Health and Long-Term Care; spending on drugs and residential and support services by the Ministry of Community and Social Services; and, spending on occupational health and safety by the Ministry of Labour. Ontario government program spending does not include interest on debt and capital.

Percent Distribution of Ontario Government Health Spending, 2006/07, by Use of Funds



Source: National Health Expenditure Trends 1975-2006, Canadian Institute for Health Information, 2006.

Total Provincial Government Health Expenditure as a Proportion of Total Provincial Government Program Spending, by Province, 2005



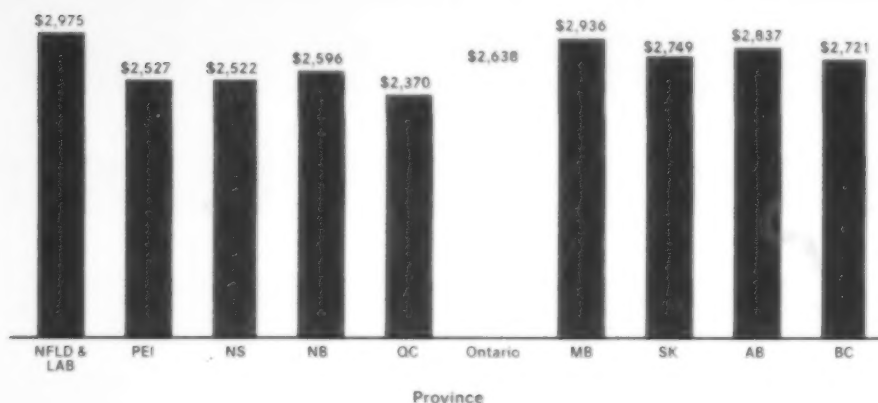
Source: National Health Expenditure Trends 1975-2006, Canadian Institute for Health Information, 2006.

budget. The amount spent on drugs (nine percent) and public health (eight percent) is higher than ever before.

Comparing provincial health expenditures should be based on spending per person, because of the difference in population size, but should also take age into account because older populations require more health care.

The next chart shows provincial government health expenditures per capita for 2004 (the most current year for which data are available), adjusted to reflect differences in the age and sex. Ontario spending, at \$2,638 per person, was slightly higher than the Canadian average of \$2,630 but lower than any other large province. However, provinces with very different

**Estimate of Total Provincial Government Health Expenditures,
Age and Gender Standardized, by Province, 2004 - Current Dollars**



Source: National Health Expenditure Trends 1975-2006, Canadian Institute for Health Information, 2006.

systems can have virtually identical spending levels. Some services are publicly financed in some provinces but not in others, and the costs of services can also vary substantially (for example, non-unionized home-care workers earn much less than unionized workers).

There is no ideal level for government health expenditures. Geography and population density affect the efficiency of health care delivery and factors like the amount of chronic disease and individual behaviour (such as smoking or seatbelt use) influence the need for health-care services. Which services are paid for publicly and which privately also affect government spending. The organization for Economic Co-operation and Development is made up of 30 of the world's wealthiest nations. Canada is among the top half of OECD countries in public spending on health expenditures per capita, below the United States, France, and Germany, but above Australia and Japan.¹⁰⁸

As we think about value for health-care dollars, it is important to remember that while lower-income Canadians use more health care than high-income Canadians, they are less healthy overall.¹⁰⁹ In short, per

capita spending doesn't tell us much about health. For that reason, there's a growing emphasis on thinking of health-care expenditures in terms of the results of the health care we give and the overall health of the population. When we are better at measuring those, we'll have a better idea of how wisely we're spending our health dollars in Ontario.

3.7.2 Health human resources

The Ontario Health Quality Council's legislative mandate requires us to report each year on human resources in the publicly funded health-care system.¹¹⁰ Our discussions with Ontarians during the year, media reports and research studies¹¹¹ showed us that access to physicians and nurses in the province is a serious concern. In our first report, we said the Ministry of Health and Long-Term Care had set a number of targets for health human resources initiatives¹¹² and identified access to doctors and nurses and other health-care professionals¹¹³ as one of its top three priorities for the health system. So what progress has been made in the past year?

¹⁰⁸ National Health Expenditure Trends, 1975-2006, Canadian Institute for Health Information, (Ottawa: 2006), p. 47.

¹⁰⁹ Health Disparities Task Group, Federal/Provincial/Territorial Advisory Committee on Population Health and Health Security: Reducing Health Disparities - Roles of the Health Sector: Recommended Policy Directions and Activities, December 2004. Found at: http://www.phac-aspc.gc.ca/ph-sp/disparities/dr_policy_e.html

¹¹⁰ Commitment to the Future of Medicare Act, 2004, S.O. 2004, c. 4(a) (iii).

¹¹¹ For example: ICES Primary Care Atlas, chapters 11 and 12, released November 23, 2006; CPSO Survey of the Profession; CIHI nursing study: Laying the Foundations for Change: A Progress Report on Ontario's Health Human Resources initiatives, Ministry of Health and Long-Term Care, December 2005.

¹¹² The three priorities to improve overall health and quality of care are: 1) reducing wait times, 2) providing better access to doctors, nurses and other health-care professionals, and 3) keeping Ontarians healthy. The Plan for Health Care - Ministry of Health and Long-Term Care. Found at: www.health.gov.on.ca/transformation/index.html. Accessed: November 4, 2006.

Part of the ministry's action on the human resources was to launch the HealthForceOntario strategy in May 2006. Its aim is "ensuring the right number and mix of appropriately educated health care professionals when and where they are needed to meet the needs of Ontario — now and in the future." It's a multi-year strategy, with a website (<http://www.healthforceontario.ca>) that features, among other things, hundreds of job listings for nurses and physicians around Ontario as well as information for students and health professionals thinking of moving to the province. Ontario communities looking for doctors can also register.

There are no simple answers to human resource issues in health care. The population and its overall health in one area can be quite different from another, which means different groups of services and professionals are needed in some towns and neighbourhoods than others. Also, what different professionals are allowed to do — their "scopes of practice" — is tightly controlled. Regulations dictate which things only physicians can do, which are done by the different types of nurses, which are for pharmacists and so on. This can add to problems when there are staff shortages. How many registered nurses we will need, for example, depends on what additional tasks they can take on and which other tasks are delegated to licensed practical nurses.

How we choose to shape our health-care system is also a factor in what caregivers we need. The number of primary-care physicians and nurses we need would change if nurses looked after most chronically ill patients in the community, as they do in Britain.¹⁰⁰ As we develop more family health teams, where groups of different professionals work together to deliver primary care, we will need a different mix of personnel than the traditional system based on physician care. That, in turn, means redesigning education and

mentorship. There is already a move to encourage multidisciplinary care by training students from different health disciplines together. The ministry has made a commitment to support inter-professional training and establish a steering committee to develop a "blueprint" for a common training year for physicians, nurses and other health professionals.

However, there are three essential ingredients for improving the health human resources situation in Ontario:

- Increase Ontario's supply of health practitioners, through expanded training and licensing of new practitioners and greater retention of existing ones;
- Ensure appropriate distribution of providers throughout the province, not just in large cities; and
- Assure the appropriate mix of health professionals.

Increasing the supply of professionals will not improve access for most Ontarians unless there are strategies to redistribute caregivers to under-served areas. Recent research shows systematic differences in access to care among Canadians,¹⁰¹ depending on where they live. Rural Canada has 21.1 percent of the population but just 9.4 percent of physicians and only 2.4 percent of



¹⁰⁰ Foster G, Gantley M, Feder G & Griffiths C. (2005) How do clinical nurse specialists influence primary care management of asthma? A qualitative study. *Primary Care Respiratory Journal*; 14(3):154-60; Bowler M. (2006) Use of community matrons for care of long-term conditions. *Nurs Times*;102(33):31-33; Astin F, Closs SJ & Lascelles M. (2005) A 21st Century approach to chronic disease management in the United Kingdom: implications for nurse education. *Contemp Nurse*; 20(2):201-11.
¹⁰¹ Hay D, Varga-Toth J & Hines E. (2006) Frontline Health Care in Canada: Innovations in Delivering Services to Vulnerable Populations. CPRN Research Report Fj63. Found at: <http://www.cprn.com/en/doc.cfm?doc=1554>
¹⁰² Jong M. (2006) President's message - Growing like a weed. *Canadian Journal of Rural Medicine*; 11(3):181-2.

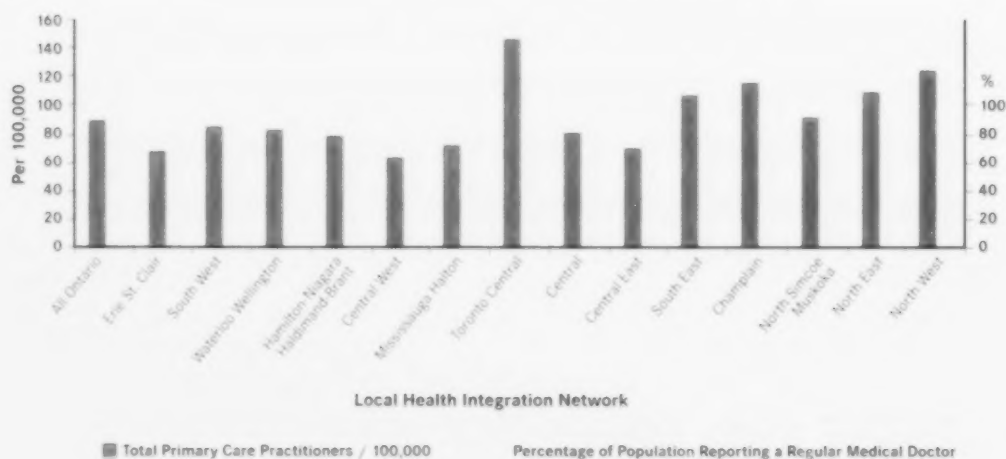
We know from research that health-care professionals tend to work where they trained. That's the reason for new community-based nursing degree programs in northern Ontario – an area where it can be pretty tough to attract nurses and other professionals. The program, linked with Confederation College and Lakehead University, is training nurses in remote areas, focusing on the kind of work nurses do in northern communities, so they won't face the disconnect some nurses trained in big-city hospitals face when they arrive on the job in a rural or remote spot. The program, now in its third year, also makes it easier for northerners to train as nurses. In the past, people who wanted to study nursing had to travel to Lakehead's Thunder Bay campus, but now they have the option of training in four smaller communities – Sioux Lookout, Fort Frances, Dryden and Kenora. About 20 nurse-trainees have enrolled so far and the first of them are expected to graduate in 2008.

medical specialists.¹⁰⁰ Paradoxically, whether Canadians report having access to a family doctor seems unrelated to the number of doctors in their area, because how practices are organized and how physicians and other health-care workers share the workload affects how many patients get care.

It's not possible to calculate the system's capacity simply by counting professionals because some work longer hours and others may have a different "scope of

practice," specializing in certain patients or problems. The number of primary-care physicians is holding steady overall, but younger physicians work fewer hours and see fewer patients than their older counterparts (a Manitoba study found that the most active doctors are those in the 55-64 age range).¹⁰¹ The 2004 National Physician Survey revealed that many doctors intend to reduce both their scope of practice and hours in the next two years.¹⁰²

Variations in Supply of Primary Practitioners and Reporting of a Regular Medical Doctor by Local Health Integration Network, 2006



Source: Primary Care Access Survey (Waves 1, 2, and 3); Ministry of Health and Long-Term Care, 2006. Physician supply data derived from the Ontario Physician Human Resources Data System; Nursing supply data derived from the College of Nurses of Ontario.

Watson D, Slade S, Buske L & Tepper J. (2006) Intergenerational differences in workloads among primary care physicians: a ten-year, population-based study. *Health Aff (Millwood)*; 25(6):1620-8.

101 National Physician Survey 2004. Found at: <http://www.nationalphysiciansurvey.ca/nps/home-e.asp>.

Although Ontario nurse practitioners report working to their full scope of practice in community health centres,¹⁵⁰ many barriers keep nurse practitioners from doing everything they are trained and licensed to do.¹⁵⁰ Pharmacists in several provinces are seeking greater roles in patient care and prescribing, and Alberta and Manitoba recently expanded pharmacists' roles to allow that. But these changes are not without controversy, because all the health professions tend to resist any of their tasks being shared or given to another group.

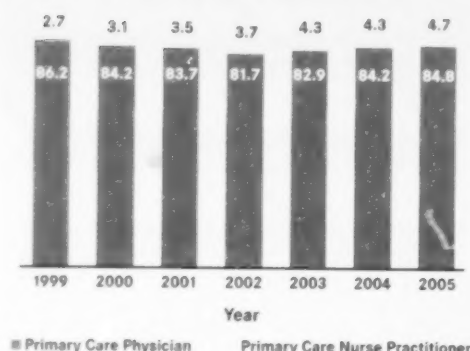
ONTARIO'S SUPPLY OF HEALTH PRACTITIONERS

The supply of primary-care practitioners measures the number of working family physicians and nurse practitioners per 100,000 population. They are not the only people who provide primary care, but their numbers are a reasonable reflection of supply.

The supply of primary-care physicians is gradually increasing but has not yet returned to the levels of the early 1990s. The number of nurse practitioners has nearly doubled in the past 15 years but remains a small proportion of the total.

Ontario has increased education and training places for most types of caregivers. The chart below shows the

Supply of Primary Care Physicians and Nurse Practitioners, 1999 - 2005
(per 100,000 population)



Source: Ontario Health System Score Card, Ministry of Health and Long-Term Care, 2005. Physician supply data derived from the Active Physician Registry of the Ontario Physician Human Resources Data Centre; Nursing supply data from the College of Nurses of Ontario, 2006.

number of places available for first-year students in different disciplines. These are substantial increases, which will eventually reduce shortages, but the effect will not be felt for some time because it takes years to produce a licensed graduate.¹⁵¹

Number of places for first-year students	Academic Year		
Medical			
Medical students**	532	780	47
Specialty training***	530	661	25
Training and assessment opportunities for internationally trained medical graduates*	24	200	733
Nursing*			
Registered nurses (RN) ¹⁵²	3,363	3,407	1
Registered practical nurses (RPN)	1,308	2,129	63
Nurse practitioners (NP) ¹⁵³	75	100	33
Other Health Professions			
Pharmacists ¹⁵⁴ +	120	240	100
Midwives**	38	60	58
Medical laboratory technologists (places filled)**	128	331	159
Medical radiation technologists (places filled)**	279	342	23

Source: *Department of Health Human Resources, MOHLTC; **Ministry of Training Colleges and Universities; ***The Canadian Resident Matching Service data; +College of Pharmacists of Ontario; **Midwifery Education Program, Ryerson University.

¹⁵⁰ Sidani S, Irvine D & DiCenzo A. (2000) Implementation of the primary care nurse practitioner role in Ontario. *Can J Nurs Leadersh*;13(3):13-9

¹⁵¹ De Wit L & Ploeg J. (2005) Critical analysis of the evolution of a Canadian nurse practitioner role. *Can J Nurs Res*; 37(4):116-37

The effect of the increased training seats will be felt in the health human resources workforce over the next three-to-seven years, depending on the length of training for each health profession. For example, the increase in medical training seats will not impact the physician resource pool for at least another six years — longer for specialists.

Canadian medical school graduates only

Nursing does not have a set number of funded seats, so these numbers are "training places filled."

Nurse practitioner numbers are full-time equivalent positions available. Because of part-time studies, the actual number of students is slightly higher. Pharmacy dates vary: the University of Toronto had 120 spots 2000-2001, increasing enrolment to 240 places for September 2006. When the new pharmacy school opens at the University of Waterloo, it will add 120 pharmacy training positions annually for four years.



In 2006, all 200 positions for international medical graduates were filled with eligible candidates for the first time since the program expanded.¹⁵⁰ Further progress is expected once the ministry's assessment centre for internationally trained professionals becomes fully operational in early 2007. We also looked at the importance of these professionals in section 3.5.2.

Health providers are aging and, along with the rest of the baby boomers, getting closer to retirement. The average age of physicians has increased from 49.1 in 2000 to 51.7 in 2005. Similarly, the average age of nurses has increased from 44.1 in 2000 to 45.2 in 2005. But, because of lack of data and different retirement patterns, we don't know how many health personnel retire each year and so can't know if the number of new trainees is sufficient to replace them.

Some disciplines are particularly short-staffed.¹⁵¹ There are not enough doctors and nurses trained for and practising in public health.¹⁵² Mental health remains one of the most severely under-resourced areas of health care and there are shortages of workers for Aboriginal health care as well. We do not have data on the availability of home-care workers, or how many French-speaking providers there are.

We at the quality council believe that a single, central lead for all human resources initiatives, with expert input from the program areas, is the best approach to this system-wide problem.

THE MIX OF HEALTH PROFESSIONALS

The ministry is emphasizing increasing the number of doctors and nurses, but also maximizing the ability of providers to deliver care the most effective and efficient ways. We're seeing that happen as more physicians join other providers in inter-professional teams, which we mentioned at the beginning of section 3.1. Physicians are also working with new types of providers, sometimes called "physician extenders," who take over some tasks to free up the physician. These providers include physician assistants, nurse endoscopists, surgical first assists, clinical-specialist radiation therapists and anaesthesia assistants.

The ministry has also reviewed the scopes of practice of health professionals. The review made a number of recommendations about how health providers can use their skills most effectively, suggesting, for example, that pharmacists and optometrists be given limited authority to prescribe medication.¹⁵³ It also called for regulating another four types of health providers — naturopaths, homeopaths, kinesiologists and psychotherapists.¹⁵⁴ Legislative amendments were introduced mid-December, 2006, to modify existing scopes and increase access to select health services.¹⁵⁵

It's possible that a more efficient use of providers in multi-disciplinary teams will meet health-care needs without requiring an increased supply of workers. New models of care should be assessed for their human resource demands as well as their health benefits.

3.7.3 E-health

Good, efficient health care requires lots of information — from details on every aspect of a patient's history of care to data on all the treatments available. Good care, as we've said, is also integrated, which means all the information gathered by a range of different health-care providers must be shared, available to all providers efficiently and quickly, stored in a way that respects patient privacy and used to provide the best-possible care. All of this adds up to computerized patient records, which can improve decisions about care, reduce medical errors and increase efficiency. Universal

¹⁵⁰ 218 international medical graduates were accepted for assessment and training in 2006. Last year, for the second year in a row, the College of Physicians and Surgeons of Ontario issued more licenses for IMGs than Canadian medical graduates.

¹⁵¹ Last year, we looked into the challenging human resource shortages in public health, mental health, home care and underserved communities (Aboriginal, francophone, rural/remote, and recent immigrants).

¹⁵² The Public Health Capacity review recommended creating a task force on public health human resources, and a strategy to revitalize the public health workforce.

¹⁵³ New Directions: Regulation of Health Professions in Ontario, Health Professions Regulatory Advisory Council, April 2006.

¹⁵⁴ Bill 171 "An Act to improve health systems by amending or repealing various enactments and enacting certain Acts." First Reading, December 12, 2006: Schedules O, P and Q: legislative amendments providing for the regulation of naturopaths, homeopaths, kinesiologists and psychotherapists.

¹⁵⁵ Bill 171, "An Act to improve health systems by amending or repealing various enactments and enacting certain Acts." First Reading, December 12, 2006.

electronic health records, built on common standards and core information requirements, are also crucial to building a comprehensive and co-ordinated health system, because they improve our ability to measure, assess and manage care and to find places we can do things better.

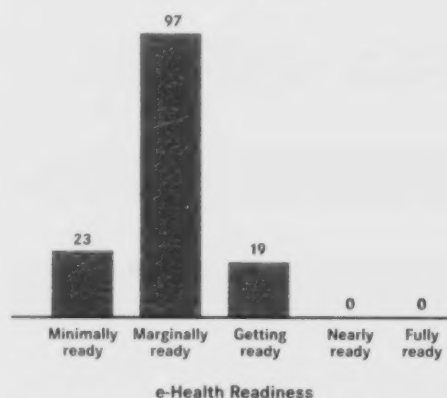
Ontario does not have a province-wide electronic health record for all Ontarians, but some hospitals have been developing in-house electronic records, which capture only what's done for a patient in that hospital. To assess Ontario's e-health resources, the quality council has examined e-health capabilities in hospitals, the overall investments in information management and some of the progress we have made in e-health in the last year.

The Ontario Hospital Association and the Ontario Hospital e-Health Council did a survey to measure how ready hospitals are to use electronic records for ordering laboratory tests or drugs or to share tests and notes with physicians or other hospitals. They had five levels for rating hospitals' readiness to use electronic health records:

- Fully ready — the records are fully implemented and used by most or all intended users and there is no other usual way to perform these functions;
- Nearly Ready — the records are implemented and commonly used by some of the intended users;

- Getting Ready — the records are either in pilot or production and used by a few intended users;
- Marginally Ready — the records are being implemented; or
- Minimally Ready — functionality requirements for the records have not been considered or have been identified and discussed but minimal progress has been made towards planning, procurement or implementation.

**e-Health Functional Readiness Score, 2006
(# of Hospitals)**



Source: e-Health Readiness Survey, Ontario Hospital Association, 2006.

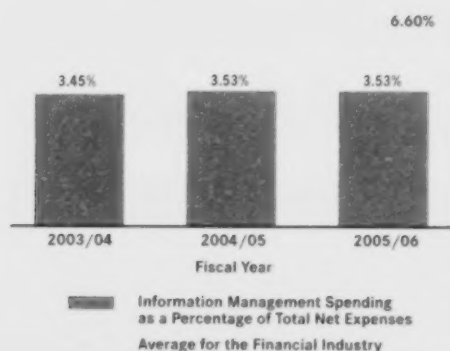
None of the hospitals surveyed have fully implemented or are nearly ready to implement a comprehensive electronic health record. However, about 15 percent are getting ready to and over two-thirds have at least some components in place. This survey is a useful baseline for judging future developments of electronic health records in hospitals.

Moving to e-health is a significant challenge because hospitals have to make their systems function together to share data while getting practitioners to adopt a new way of working. There are several examples of hospitals that have made great strides with e-health, but there are many more that are a long way from being able to collect and use internal information electronically, let alone share it with others. This is bad for integrating care and makes collecting, sharing and reporting data difficult. Money that could go to building a competent universal electronic health record is instead paying for individual computer systems that don't talk to each other. Staff wastes time collecting and coding data.



possibly making data entry errors, when the data could be generated automatically. As we explore in section 5.2.1, electronic health records are essential for managing chronic illnesses and avoiding unpleasant and costly complications for these patients. This is a clear example of how investing in technology could greatly increase efficiency in the Ontario health system.

Information Systems and Communications Net Expenses as a Percentage of Total Net Expenses, 2003/04 to 2005/06



Source: Ontario Health System Scorecard, Ontario Ministry of Health Long-Term Care, 2006. Data derived from the Ontario Healthcare Financial and Statistical System and annual public accounts for the Ontario government.

We also need to invest in health information management. The graph above shows how much selected health-care organizations are spending on information systems, which gives us a sense of how much is being spent overall in the area. The answer is about 3.5 percent of total spending on health, which is low compared to other industries or other health jurisdictions. In 2005/06, Ontario spent \$891 million on health-system information management. Since 2001/02, spending has increased by 44 percent in hospitals and 68 percent in the ministry. The financial industry, which also used information intensively, spends about 6.6 percent of total revenue on information management.¹⁰³

In the past year the Ministry of Health has developed a comprehensive e-health strategy. At the time of writing

this report, the strategy was under consideration by the government. The ministry has also started a series of specific projects to improve health information management, including the development of the Wait Time Information System, which is expected to connect with other e-health projects in the development of a standardized electronic health record for Ontario. Other projects to improve data sources and the ability to use information include a new home-care database, a data "warehouse" for the local health integration networks and work on the scorecards that track the performance of the health system. There's also been a report on the quality of data, recommendations on data standards and collection/reporting processes and toolkits and data guides for health analysts and planners.

While we continue to see signs of progress on a project-by-project basis, we still maintain that a single point of accountability and a master plan for e-health are prerequisites for success. In other words, one person should be in charge of implementing the approved e-health strategy and business plan. As it is, we see evidence of a limited and uncertain investment plan relative to the large potential returns from investment in e-health.

3.8 INTEGRATED

"All parts of the health system should be organized, connected and work with one another to provide high-quality care."

There is general agreement that we need a more integrated health system. Integration is thought to improve health care in many ways:

- Effectiveness – better co-ordinated services mean patients don't fall between the cracks and patients are more likely to follow prescribed care; procedures are standardized, accountability is shared and improvements can be made more quickly and easily;

Estimates include spending by hospitals, Community Care Access Centres, Children's Treatment Centres and the Ministry of Health and Long-Term Care. Other information management costs (decision support, clinical informatics, and training), investments in other sectors (e.g., long-term care), and government spending by LHIN are not included here due to limited data.

Pederson I. & Leonard K. (2005) Measuring Information Technology Investment among Canadian Academic Health Science Centres. *Electronic Healthcare*, 3 (3): 94-102.

- Efficiency – better use of facilities and personnel means duplications are avoided, costs minimized and delays reduced; and
- Equity – resources are allocated on the basis of need so everyone is treated equitably.

Most health systems in Canada have attempted to increase integration of care. Most provinces have health regions which have a single administration overseeing hospitals, long-term care homes and sometimes public health or social services as well. But clinical and institutional independence persist despite regional governance and pooled budgets.¹⁰⁴ Ontario's local health integration networks are designed to increase integration, but they are still new and older administrative and budgetary arrangements are largely intact.

There are no hard measures for how integrated a health system is; mostly we measure integration through surveys.¹⁰⁵ There is some agreement integration succeeds when it's focused on achieving certain goals — once a goal is identified, what services need to be integrated to achieve it are easier to see.

We're reporting on integration because we think it is a key part of a high-performing health system. As a first step, we looked at three things we believe reflect integration to some extent. They are:

- The number of days people spend in hospital when they are well enough to be in an alternative level of care;
- Admissions to hospital for chronic illnesses that could be treated in the community; and
- The percentage of acute-care stroke patients discharged directly to regional rehabilitation centres.

In a health-care system where acute care, long-term care and community care were well integrated, there would be little delay in moving patients who no longer need a hospital bed to a more appropriate place. In section 3.6 we reported that nine percent of patients in Ontario's acute-care beds do not need to be there, but can't leave, because:

- There is no residential health-care facility or long-term care home available;
- The hospital doesn't have the proper organization in place to make sure people are discharged as soon as they're ready;
- There aren't community services to support recently discharged patients; or
- There are problems with transferring patients.

An integrated system would ensure the resources were in place when patients are ready for discharge. That's better for recovering patients and frees space in hospital as well.

Not every problem that sends someone to a hospital emergency department is medical — often patients need community services as much as they need medical ones. The 'Community Referrals by EMS' project was designed by Solutions — East Toronto's Health Collaborative, a voluntary network of 15 East Toronto health organizations, to provide paramedics with a new option of linking people with community health and support services. Previously, paramedics only had two options for helping people after administering medical treatment: transporting them to a hospital emergency department or leaving them at home. Aimed at persons who frequently call EMS or who are 'at-risk' in the community, the initiative has reduced the use of 911 calls and cut trips to the emergency department. Most important, it's helped vulnerable people get in touch with community services that can keep them out of hospital and get them looked after in their own homes.

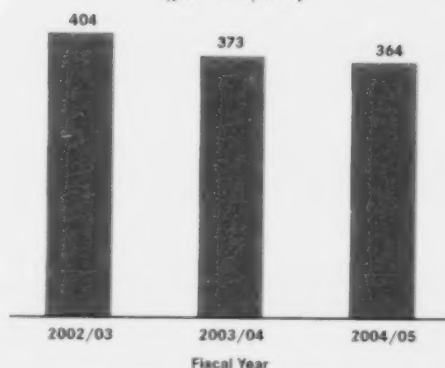
Abbot A. *The System of Professions: An Essay on the Division of Expert Labor*. Chicago: University of Chicago Press, 1988.

Ahgren B & Axelsson R. (2005) Evaluating integrated health care: a model for measurement. *International Journal of Integrated Care*; 5: e01. Found at: www.pubmedcentral.nih.gov/picrender.fcgi?artid=1395513&blobtype=pdf; Devers KJ, Shortell SM, Gillies RR et al. (1994) Implementing organized delivery systems: an integration scorecard. *Health Care Management Review*; 19(3):7-20; Gillies RR, Shortell SM, Anderson DA et al. (1993) Conceptualizing and measuring integration: findings from the health systems integration study. *Hospital and Health Services Administration*; 38 (4):467-89.

Some health conditions, such as asthma, epilepsy, acute bronchitis, pneumonia and heart disease, are normally treated in the community, but occasionally get bad enough to put people in hospital. (The technical name for these illnesses is ambulatory-care sensitive conditions). Not all those hospital stays can be avoided, but with good community-based preventive care, primary care and patients trained to care for themselves, the number of hospitalizations should be low. If there are too many hospitalizations for these conditions, it may be because of a lack of integration, or because care is substandard.

The lack of integration may not be exclusively in the health system. Sometimes the problem is between health care and non-medical social support systems. Socio-economic status is a factor in how often people are hospitalized for these health problems: admission to hospital is higher for disadvantaged people, despite their frequent visits to primary-care physicians.¹⁰⁶ Looking at the number of hospitalizations may be a way to measure access to, and use of, integrated services and community-based care, but we cannot say so definitively. Still, the number of hospitalizations for these conditions is dropping, which is good news. The most recent Ontario rate of 364 per 100,000 in 2004/05 is lower than the Canadian average of 392 per 100,000 in the same year.¹⁰⁷

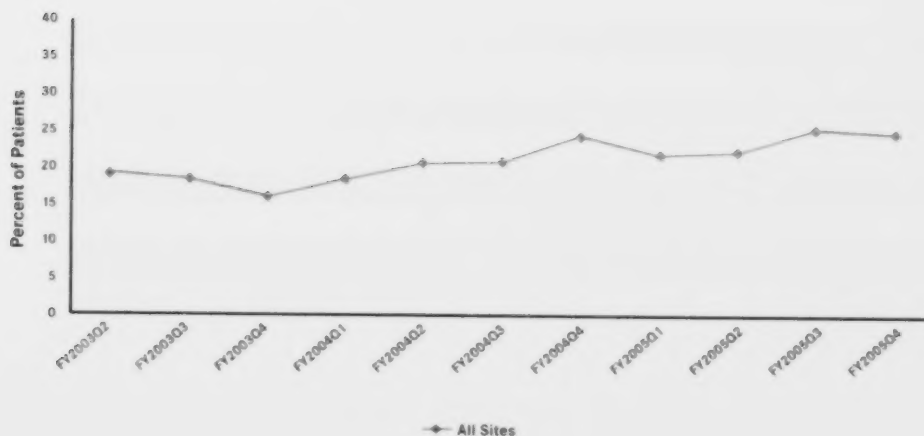
Acute Care Hospitalization for Ambulatory Care-Sensitive Conditions for Population Age 75 or less, 2002/03 to 2004/05 (per 100,000)



Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2005. Data derived from the Provincial Health Planning Database (MOHLEP).¹⁰⁸

Our final measure for integration examines whether stroke patients move effectively through the steps of treatment between different care settings. Inpatient stroke rehabilitation has a strong positive impact on stroke patients' recovery and how well they function afterwards.

Discharged from Acute Care to Inpatient Rehabilitation



Source: Stroke Performance Indicator Report, Ontario Stroke Strategy, 2006

Roos L I, Walld R, Unahova J & Bond R. (2005) Physician visits, hospitalizations, and socioeconomic status: ambulatory care sensitive conditions in a Canadian setting. *Health Services Research* 40 (4):1167-85.

Hospital Morbidity Database (2006). Canadian Institute for Health Information.

Conditions: grand mal status and other epileptic convulsions; chronic obstructive pulmonary disease; asthma; congestive heart failure; hypertension; angina; and diabetes. Numbers reported this year differ from those reported last year due to differences in the methodology used to develop this indicator. Please refer to the technical report for further information

The graph on the previous page shows that regional stroke centres (specialized units in large hospitals) discharge one in four patients from acute care directly to an inpatient rehabilitation facility. The rate will never reach 100 percent because some patients don't need inpatient rehabilitation, but the Ontario Stroke Strategy suggests that it should be higher than it is.¹⁶⁷ It may be that in some centres rehabilitation begun in the hospital substitutes for services in a free-standing rehabilitation facility.

3.8.1 Progress of the local health integration networks

Enhancing integration within the health-care system is a primary goal of the Ministry of Health and Long-Term Care. For this reason local health integration networks (commonly called LHINs) have been established to integrate services for 14 geographic regions in the province. After the chairs and first two board members for each network were announced in mid-2005, the focus was to get their leadership and operations in place, do community consultations, analyse needs and deliver their first integrated health service plans by the end of October 2006.

In most cases, the integrated health-service plans contain comprehensive information on the cultural and demographic make-up of the region. We've advised the ministry on ways to strengthen the health quality, planning and health information management components in many of these plans. It's the start of an evolving quality management process.

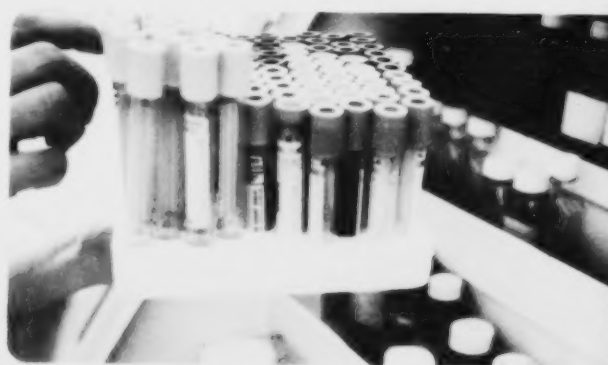
3.9 FOCUSED ON POPULATION HEALTH

"The health system should work to prevent sickness and improve the health of the people of Ontario."

3.9.1 The various meanings of population health

How we look at the overall health of the population and what parts of it we measure are important. The study of population health has made great breakthroughs in explaining what makes some people healthy and others less so. From a disease perspective, the leading causes of death are cancer and heart disease. However, taking a population-health perspective, which looks at the strong links between health and socio-economic status suggest that disparities are the number one cause of illness and death.¹⁷⁰

The extent of health disparities in Canada is startling. Seventy-three percent of people in the top 20 percent of the income scale rate their health as excellent or very good compared to 47 percent of people whose incomes are in the bottom 20 percent. Males in the top 20 percent income bracket live five years longer than men in the bottom bracket; the gap between the wealthiest and poorest women is two years. The life expectancy of Aboriginal men is seven years shorter than that of non-Aboriginal males; the gap between women is five years.¹⁷¹



¹⁶⁷ Teasell R, Evans M & Jutai J. (2006) A Blueprint for Stroke Rehabilitation: Improving Outcomes and Maximizing Efficiencies. Canadian Stroke Network.

¹⁷⁰ "A population-health strategy focuses on factors that enhance the health and well-being of the overall population. It views health as an asset that is a resource for everyday living, not simply the absence of disease. Population health concerns itself with the living and working conditions that enable and support people in making healthy choices, and the services that promote and maintain health." From Federal/Provincial/Territorial Advisory Committee on Population Health. Strategies for Population Health: Investing in the Health of Canadians, 1994; Lalonde M. A New Perspective on the Health of Canadians. Ministry of Supply and Services 1974. Found at: <http://www.phac-aspc.gc.ca/ph-sp/phidd/pdf/perspective.pdf>. Accessed November 4, 2005; Epp J. Achieving Health for All: A framework for Health Promotion. Released at First International conference on Health Promotion, Ottawa, 1986. Found at: http://www.hc-sc.gc.ca/hcs-ss/pubs/care-soins/2001-frame-plan-promotion/index_e.html. Accessed September 7, 2006.

¹⁷¹ Health Disparities Task Group. Federal/Provincial/Territorial Advisory Committee on Population Health and Health Security. Reducing Health Disparities - Roles of the Health Sector: Recommended Policy Directions and Activities, December 2004. Found at: http://www.phac-aspc.gc.ca/ph-sp/disparities/dr_policy_e.html.

Even where excellent health-care services are accessible to all, health remains closely linked to economic status. Many low-income households lack a sufficient quantity or variety of healthy food.²⁰ Among low-income people, some groups are less healthy than others: older people, the unemployed, welfare recipients, single women supporting children, Aboriginals and immigrants are all more at risk of illness. Combining risks can make individuals even more vulnerable. Several studies in different countries have found new immigrants are more likely to suffer from depression because of both trauma and dislocation and lower socio-economic status.²¹

Individual choices and behaviour have an enormous influence on health, of course, but what people choose is heavily influenced by where they are born, grow up, live, and work. People with more money for healthy food are more likely to eat well than people who must buy cheaper calories high in fat, sugar, and salt — and it's less trouble to shop for wholesome food if there's a full-service grocery store in the neighbourhood, or you have a car. It's

easier to get regular exercise where streets are safe and pleasant to walk, if there are parks and other recreation facilities close by, and there are few barriers to participating in sports. It's not surprising that by and large, people in low-paying, dead-end jobs are less motivated to have healthy lifestyles than people of means.

3.9.2 Strategies to improve population health

Strategies to improve population health should be as far-reaching as the causes of ill health and go beyond what the health-care system alone can do. Access to education and opportunity, air quality, exercise-friendly community design, family and social support networks, stress, adequate housing, working conditions, and a many other social factors all contribute to population health. Attention to these factors is important for achieving widespread improvements in health. Strategies that also promote better health include those that prevent disease, and early detection measures. Health promotion encourages people to increase



When a rural village in the area of the Gateway Community Health Centre lost a private-practice family doctor, the centre worked with the community to develop the Rural Family Program. This program recognizes it takes more than just medical care to build the links needed for a healthy community. The program incorporates support for young families who were at risk due to isolation, lack of transportation, low income, unemployment or underemployment, food security and limited access to phone services. Gateway staff held a focus group and, working with the community, set five priority areas for action. The village needed support for mothers, including early childhood programs and access to primary care for immunization and well-baby checks. In May of 2005 the Rural Family Program was launched. Twice a month there are community lunches focused on stretching their food dollars, and every week, a drop-in program called Cradling Arms sees a nurse visit, check babies and advise on breast feeding and other issues. There's a playgroup for older children as well. Gateway also supported moving cheque-cashing from the local pub — which led to spending on alcohol and left little for food. Now cheques are cashed at the grocery store, and people without transportation are brought supplies from nearby food banks by volunteers. Fifteen families used the program in its first year, and now they're working together to build community beyond the options Gateway brought them, by identifying other resources available to them in the county and bringing in guest speakers to help them fend for themselves.

The Daily. (2000) Study: Food insecurity in Canadian households. *Health Reports* 16, 3. Found at <http://www.statcan.ca/Daily/English/050503/d050503b.htm>. Accessed December 13, 2006.

Lai DWL. (2004) Impact of culture on depressive symptoms of elderly Chinese immigrants. *Canadian Journal of Psychiatry* 49: 820-827. This study looked at older Chinese immigrants to Canada. They tended to have low education and income as well; Wilmoth JM & Chen PC. (2003) Immigrant status, living arrangements, and depressive symptoms among middle aged and older adults. *Journals of Gerontology Series B* 58-S305-S313; Oppedal B & Roysamb E. (2004) Mental health, life stress and social support among young Norwegian adolescents with immigrant and host national background. *Scandinavian Journal of Psychology* 45 (2):131-144; Momartin S, Steel Z, Coello M et al. (2006) A comparison of the mental health of refugees with temporary versus permanent protection visas. *Medical Journal of Australia* 185: 357-61.

control over their health, mostly by changing behaviour. Prevention identifies and reduces or eliminates factors that cause ill health. Immunization, chlorination of drinking water and seatbelt laws are all preventive measures. Early detection of certain types of cancers and other diseases results in more effective treatment and greater chances of survival.

Ontario's Ministry of Health Promotion is developing an inter-sectoral plan for health. The Minister of Health Promotion chairs the inter-ministerial Committee on Healthy Living.¹⁷⁰ It aims to build health promotion across the Ontario government, influence the development of healthy public policy, and improve the co-ordination of policies and programs that improve the health and well-being of Ontarians. The first efforts of the committee have focused on strategies that support good nutrition and physical activity, with particular attention on improving health outcomes for children and youth.

Other activities to improve population health in Ontario include:

- Regulations restricting smoking and intensive anti-tobacco education;
- Screening programs for breast, cervical and colon cancer;
- An influenza immunization program;

- A requirement that boards of health provide clinical services for sexually transmitted infections (STI), mandatory condom distribution for high-risk populations and mandatory notification of sexual partners when an STI is diagnosed; and
- Mandatory STI education in schools.

Since the universal immunization program was put in place in Ontario in 2000, influenza-related hospitalizations in people aged 20-34 and 35-49 have dropped 20 percent.¹⁷¹ The next section presents trends related to other areas of health promotion and screening programs.

This year, we looked at health behaviours, sexually transmitted infections, and cancer screening as measures of population health. More information on how well we are doing on these measures for different groups of Ontarians including the poor, immigrants, residents of inner city and rural areas, or Aboriginal people could help us close gaps in health and reduce disparities. What we use to measure population health affects our approach to health problems. We need more refined data to assess and understand the impact of care, economic and social conditions and policies on health.¹⁷² Inter-sectoral efforts to improve health also need measures that tell us how we are doing with respect to the social determinants of health.



¹⁷⁰ Agriculture Food and Rural Affairs; Community and Social Services, Children & Youth Services, Education, Environment, Health and Long-Term Care, Health Promotion, Labour, Municipal Affairs and Housing, Public Infrastructure Renewal, and Aboriginal Affairs. Additional ministers and ministries are invited to participate on the committee as required to inform discussion of the agenda.
Branswell H. Ontario flu shot program seems to lower hospitalizations in younger adults: study. National Post – Canadian Press. Tuesday, December 05, 2006.

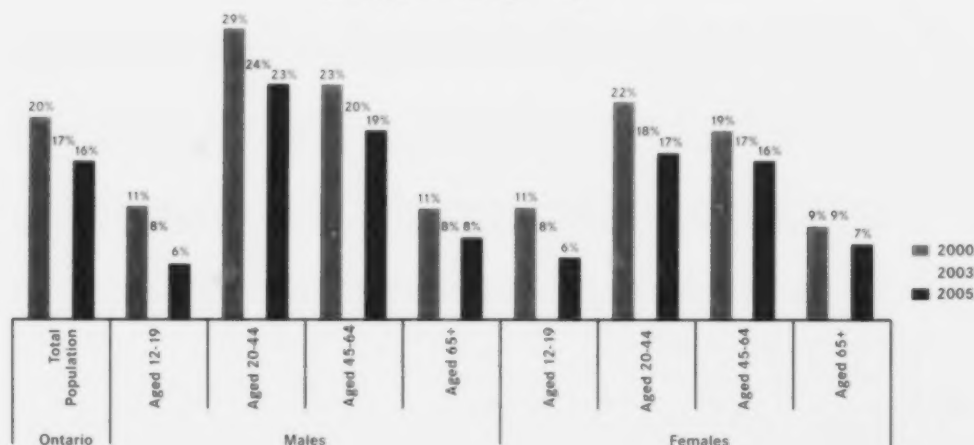
¹⁷² Iron K (2006). Moving toward a better health data system for Ontario. Institute for Clinical Evaluative Sciences – Investigative Report.

3.9.3 How is the overall health of people in Ontario?

In this report we include six measures we use to monitor the health of Ontario's population as a whole:

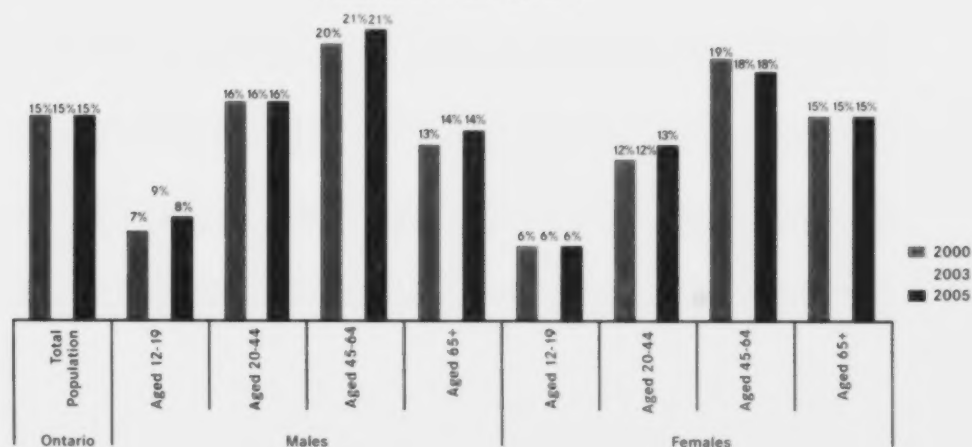
the percentage over 12 years who smoke cigarettes daily; the percentage that is obese; the percentage who are inactive; the percentage who report heavy drinking; the rates of sexually transmitted disease; and the rates of screening for breast, cervical and colorectal cancer.

Daily Cigarette Smoking by Age and Sex, 2000-2005
(% of population age 12+)



Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2005. Data derived from the Canadian Community Health Survey (Cycles 1.1, 2.1, and 3.1) and the Canadian Tobacco Usage Monitoring Survey (Statistics Canada).

Obesity by Age and Sex, 2000-2005
(% of population age 18+)



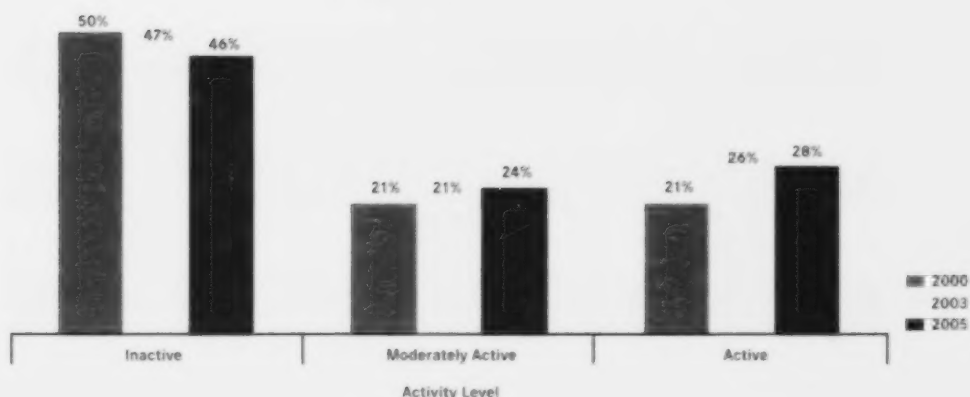
Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2005. Data derived from the Canadian Community Health Survey (Cycles 1.1, 2.1, and 3.1) (Statistics Canada).

This indicator does not take into account the length of time an individual has smoked, the amount or brands smoked, any attempts to quit, or exposure to second-hand smoke. Individuals living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of the Canadian Armed Forces, and residents of certain remote regions are excluded.

Percentage of the population aged 18 and older with a body mass index in the obese (≥ 30) category. Body mass index (BMI) is a method of classifying body weight according to health risk (Statistics Canada, 2005). $BMI = \text{Weight of the individual in kilograms} \div \text{the height of individual in meters squared}$. Note: Respondents report their height and weight and Statistics Canada calculates the BMI.

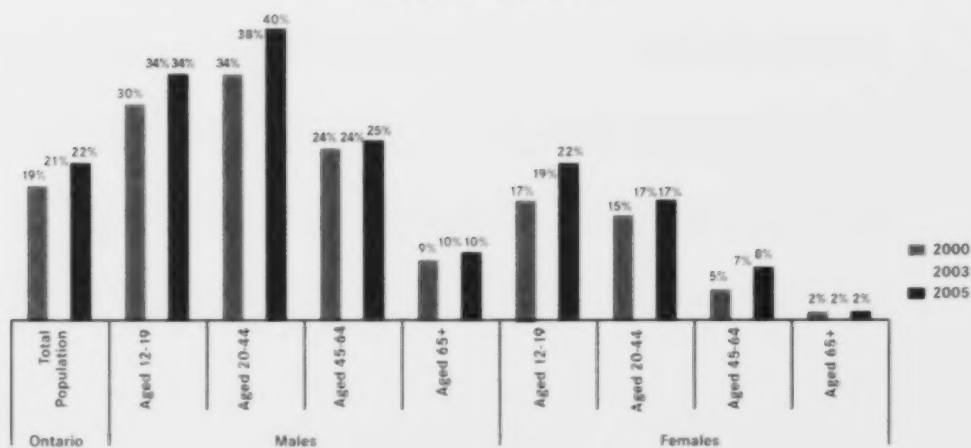
Persons under the age of 18; pregnant women; breastfeeding women; anyone whose height is under 3 feet or over 7 feet are excluded in the calculation of the BMI indicator (Statistics Canada, 2005). Residents of institutions, full-time members of the Canadian Armed Forces, persons living on First Nations Reserves and on Crown lands and populations in some remote areas were excluded from the survey.

Physically Inactive, Moderately Active and Active, 2000-2005 (% of population)



Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2005. Data derived from the Canadian Community Health Survey (Cycles 1.1, 2.1, and 3.1) (Statistics Canada).

Heavy Drinking by Age and Sex - At Least One Episode per Month, 2000-2005 (% of population age 12+)

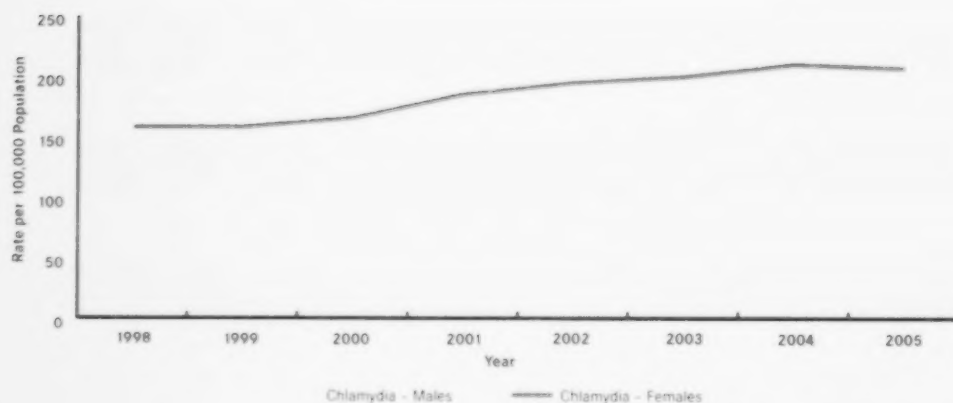


Source: Ontario Health System Scorecard, Ministry of Health and Long-Term Care, 2005. Data derived from the Canadian Community Health Survey (Cycles 1.1, 2.1, and 3.1) (Statistics Canada).

The survey is based on self-report of participation in various types of physical activity, and the index categories are calculated on an estimate of kilocalories (commonly called "calories") expended per kilogram of body weight per day. "Active" means expending an average of 5.0 or more kcal/kg/day, "moderate" is an average of 1.5-2.9 kcal/kg/day, and "inactive" is an average of less than 1.5 kcal/kg/day. Residents of institutions, full-time members of the Canadian Armed Forces, persons living on First Nations Reserves and on Crown lands and populations in some remote areas were excluded from the survey.

Residents of institutions, full-time members of the Canadian Armed Forces, persons living on First Nations Reserves and on Crown lands and populations in some remote areas were excluded from the survey.

Chlamydia Rates, 1998-2005
(per 100,000 population)



Source: Ontario Health System Surveillance, Ministry of Health and Long-Term Care, 2005. Data derived from the Reportable Disease Information System and Laboratory (LABORNT) System (MOHITC).

The key findings these graphs show are that people are smoking less, but too many are obese and not enough people are active. More people are drinking heavily. Chlamydia, a sexually transmitted disease that can cause infertility in women, is on the rise.

Daily cigarette smoking has fallen over the past five years. Men between the ages of 20 and 44 are most likely to smoke; almost one in four reports smoking daily. Daily cigarette use by 12-to-19 year olds has been cut almost in half, from roughly one in 9 teenagers to one in 17. One of the best ways to reduce tobacco-related illness is to prevent people from developing the addiction in the first place.

The obesity rate for Ontario has remained relatively steady over the last five years. Over one in three Ontarians above the age of 18 are overweight and over one in 10 are obese.⁽⁹⁾ Almost half of Ontarians are not physically active. There has been a slight increase in the number of active Ontarians over the last five years.

Almost one in five Ontarians consume five or more drinks (in one sitting) on one or more occasions per month and the rates have been increasing. Two out of five males aged 20 to 44 drink heavily.

Sexually transmitted chlamydia rates have been increasing over the past seven years. A higher rate is reported among females than males, but this may be due to a higher rate of testing for women while they are seeing a doctor for cervical screening or other reproductive matters.

Cancer Care Ontario, the province's cancer agency, has recommendations and targets for screening in its long-term plan for cancer prevention and early detection in Ontario, *Cancer 2020*.⁽¹⁰⁾ Mammography to detect breast cancer is recommended for all women aged 50 to 69. The Pap test, used to screen for cervical cancer, is recommended for all women who have ever been sexually active. Screening for colon cancer is recommended for all people aged 50 to 74, through fecal occult blood tests for most or colonoscopy for those at higher risk of developing this cancer.

The rates for most of these screens are quite low. The mammogram target is to screen nine out of 10 women aged 50 to 69 by the year 2020, but only about 60 percent of women have them and that number is unchanged in the past five years. The cervical-cancer screening target is to test 95 percent of all women aged 18 to 69 who have not had hysterectomies, but the rate is 68 percent and it has been declining slightly over the past five years.

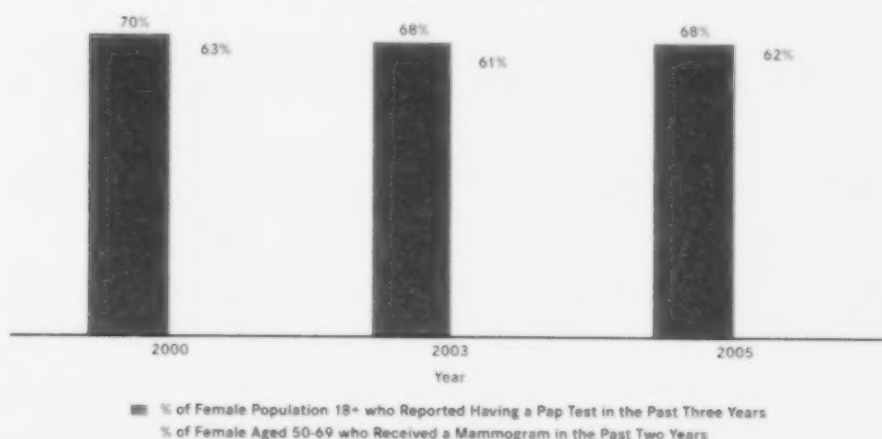
⁽⁹⁾ Inclusive of cases in Ontario residents, exclusive of cases from other jurisdictions.

⁽¹⁰⁾ Overweight is defined as body mass index (BMI) greater than or equal to 25, and obese is BMI greater than or equal to 30. Found at: www.statcanada.ca

⁽¹¹⁾ Report on Cancer 2020, Cancer Care Ontario, June 2006.

Found at: <http://www.cancercare.on.ca/documents/2006Cancer2020Report-English.pdf>.

Preventive Screening for Breast Cancer and Cervical Cancer, 2000 to 2005
(% of female population)



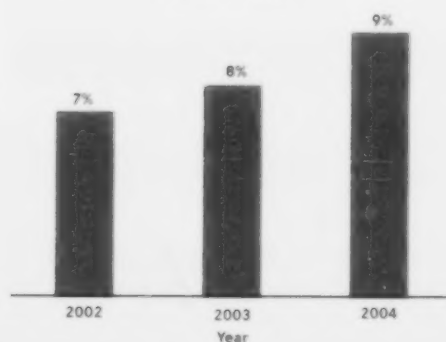
Source: Ontario Health Services Newsletter, Ministry of Health and Long-Term Care, 2005. Data derived from the Canadian Community Health Survey (Cycles 1.1, 2.1, and 3.1) (Statistics Canada).

For colon cancer screening, the target is to reach 90 percent participation of men and women aged 50 to 74 by the year 2020. The fecal occult blood test (FOBT) is an easy-to-use at-home screening kit recommended for people who have no family history of colorectal cancer or symptoms. Current levels are very low at 10 percent

but growing. In January 2007 the Ministry of Health and Long-Term Care announced a program to increase participation among this target group by making FOBT kits available through physicians' offices, walk-in clinics, community health centres and eventually, through participating pharmacies. For people at higher risk of developing this cancer, there is increased funding to improve access to colonoscopies. This will be supported by:

- A five-year campaign to educate the public and health-care providers on the benefits of colorectal screening and early detection;
- A registry to send reminders about screening and provide an evaluation tool to track overall program progress; and
- A single laboratory to handle the processing of all FOBT kits to ensure consistent quality standards and streamlined results.

**Percent of Ontario Screen-Eligible
Men & Women (Ages 50-74)
Who Receive a Fecal Occult Blood Test,
2002 to 2004**



Source: Clinical History Database, 2004; Ministry of Health and Long-Term Care.

- Percentage of the female population aged 18 to 69 who reported having their most recent Pap smear test within the past three years and proportion of the female population age 50 to 69 years of age who report they had a mammogram in the last two years for routine screening. Percentage of screening-eligible women (ages 50 to 69) receiving a screening mammogram in the year and prior year shown (includes OBSP). Residents of institutions, full-time members of the Canadian Armed Forces, persons living on First Nations Reserves and on Crown lands and populations in some remote areas were excluded from the survey. Women who have had a hysterectomy, were younger than 18, or older than 69 were excluded from the cervical cancer question.
- There are other tests such as a colonoscopy that could be used to screen for colorectal cancer, instead of FOBT. Residents of institutions, full-time members of the Canadian Armed Forces, persons living on First Nations Reserves and on Crown lands and populations in some remote areas were excluded from the survey.



3.10 CONCLUSIONS

It's clear that the idea of a high-performing system is comprised of many dimensions. Ontarians from all over the province told us that they want their health system to be accessible, effective, safe, patient-centred, equitable, efficient, appropriately resourced, integrated and focused on population health.

We spent a lot of time looking into how well the health system is performing in these nine areas, so that Ontarians can know about the quality of care in the province and what areas need improvement.

In many areas we can be proud of excellent health care and be assured that significant gains in quality are being made. Accessibility, for example, has consistently been judged a priority for Canadians and a lot of work has been done in Ontario to improve access to family doctors and to expand telemedicine programs to reach people in rural or remote areas with fewer practitioners.

There has been new focus on ensuring the appropriate mix and training of health care professionals and the organization of health care — this is so we can have a

health system that performs effectively with enough resources and efficient use of those resources. Ontarians welcome this.

In other areas our health system is performing less well. Some Aboriginal Ontarians, for example, still have trouble accessing even basic care because of where they live or how the care is delivered. Recent immigrants (in Canada less than five years) are significantly less likely to have a regular doctor than those who have been in Canada longer. If we are to have an outstanding health system, we clearly need to ensure that the same quality of care is provided to every Ontarian not matter who they are and where they live.

It is also clear is that we need better information, both to monitor performance across our nine attributes, and to drive the quality improvements needed to sustain high performance in the system.

Fully understanding wait times, for example, requires us to have more data on the clinical conditions and their severity so that we can ensure the sickest patients get seen first. Being able to sort the priority cases and manage the queues for diagnostic tests and surgery depends on more developed information systems that are integrated across the health system.

As another example, to judge the effectiveness of diabetes care we measure how many new patients with type 2 diabetes get the recommended eye exams. But that's only one part of comprehensive management. We would also like to be able to track whether patients get their glucose levels checked and controlled regularly, get proper foot exams and are assessed for complications such as heart and kidney disease. We also want to be able to ensure that different groups of patients across the province, who are at higher risk of developing diabetes, such as Aboriginals, receive the same level of care.

When it comes to cancer care we are heartened to report that almost all patients with stage 3 colon cancer who attend regional cancer care centres receive the recommended treatment. But we know that only half of Ontarians with colorectal cancer get care at these specialised centres — and we have virtually no information about the quality or outcomes of care for the other half. And we don't have information about the stage of cancer at diagnosis and whether or how far it had spread for any cancer patients.

Better and more complete data would let us plan better ways to improve care, ensure appropriate resources are in place and to monitor regions that are underperforming or specific populations that are not doing as well as they should.

Electronic health records are a critical ingredient of this. They would provide information about what people are receiving care, the types of care they are receiving, and the outcomes of that care. These data are critical to assessing and improving the health of Ontarians.

We also need this information to drive improvement across the health system. We've seen that you can make changes that improve quality in the province's Wait Time Strategy. But a system-wide quality improvement strategy needs more comprehensive data that are collected in a standardized fashion across the system. We'll talk more about this in section 4, which discusses our information needs and how to improve the quality of the health system.

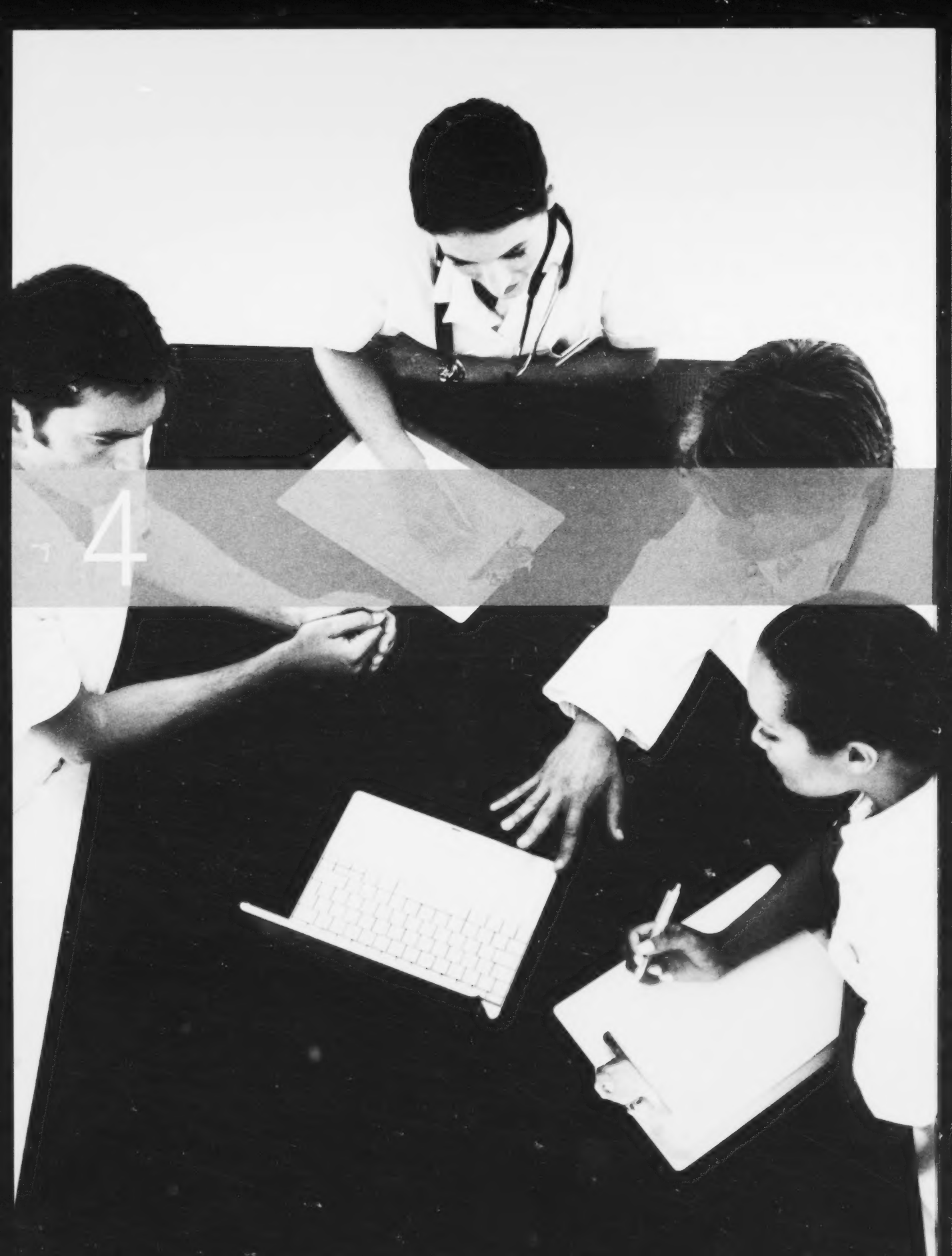
Across the nine attributes of a high-performing system, there are indications the system is not performing well enough when it comes to chronic disease. Chronic disease causes many Ontarians a great deal of suffering and costs the system a lot. As the population ages,

chronic disease will increase. Particular improvements are needed to the system where it serves patients with chronic disease.

For example, most people with chronic diseases would be better off if their illness were well-managed in the community and by their primary care providers, to limit hospital stays as much as possible. But readmission rates for heart attack and asthma are at similar or higher levels than the Canadian average, and that tells us we're not doing a good enough job of managing chronic disease. Better integration of services needed to manage chronic disease could reduce the number who need to return hospital. Reduced rates of daily smoking will help to prevent some chronic diseases, but we could do more to prevent them by increasing physical activity, reducing obesity and looking beyond the health-care system to address other factors that lead to ill health. The limited data we have on chronic disease do not provide the whole picture, but clearly we need to do better in preventing and managing these serious and widespread health problems.

Section 5 takes an in-depth look at the problem of chronic disease, and what it will take to make significant system-wide improvements in that area.



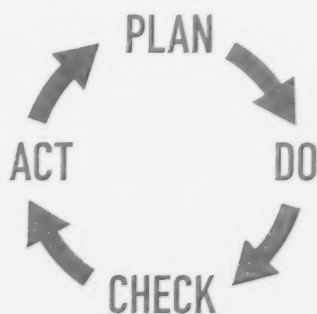


WHAT WE KNOW ABOUT QUALITY IMPROVEMENT



Now that we've given our assessment of how well the health system is meeting the nine attributes of a high-performing health system, we're going to look at how to make it better. We use a method known as continuous quality improvement, which was developed by two U.S. statisticians, Walter A. Shewhart and W. Edwards Deming, who transformed industry around the world by applying statistical methods to improving quality. It's based on a four-step cycle:

- **Plan:** Identify changes needed to make improvements and how to measure them.
- **Do:** Make the changes.
- **Check:** Measure and review to determine whether there has been improvement.
- **Act:** Make more changes based on what you learned.¹⁸⁶



This model is very simple — Dr. Deming said the approach can be used to improve anything. But improving a health system serving more than 12 million people in a large province is an immense challenge. It can be done. In this section, we'll start by looking at who is accountable for quality, review what it takes to improve the performance of a health system and the health professionals working in it. Finally, we'll look at a continuous quality improvement model that appears to be working — Ontario's Wait Time Strategy.

4.1 ACCOUNTABILITY FOR QUALITY

Our job at the quality council is to report at least once a year on overall health quality in Ontario. This year, the local health integration networks are due to start reporting on the performance of health care in their areas. But the care you need is actually delivered by individual health-care organizations — your local health centre, hospital, long-term care facility, lab, public health unit and so on. How can you be sure the care you receive from a particular institution is of sufficiently high quality? We believe the only way to report effectively at the organizational level is through assessments made by impartial third parties, and public reporting of the results. There are two basic types of independent assessment — regulatory enforcement and accreditation.

¹⁸⁶ Deming WE. *Out of the Crisis*. MIT Press, 1986; Shewhart & Walter A. *Statistical Method from the Viewpoint of Quality Control*, (1939) reissued Dover Publications December 1, 1986.



Some health-care services and professions are subject to regulations, put in place by government or self-governing organizations, to ensure minimum standards of care are in place and enforced. Enforcement can be done through licensing (sometimes through tests or reviews when licences are issued or renewed), by spot-checks, regular inspections or through investigation of complaints. Regulatory processes are mandatory; if you want to deliver certain services, you must comply with the regulations for them.

Accreditation may or may not be mandatory. Rather than checking whether minimum standards are met, it focuses on encouraging improvement. In most of Canada, accreditation is voluntary, but Quebec recently made it a requirement for all health-care organizations, regardless of whether their funding comes from public or private sources.¹⁰ Accreditation works by having an outside team compare the quality of an organization's work with recognized standards of excellence. The process of accreditation helps organizations to see where they are falling short of delivering the best care possible and identify areas that need improvement or approaches that are working and should be adopted more broadly. Accreditation reports encourage organizations to reach for a higher standard and where it's lacking, plan to improve. Depending on the accrediting organization, its findings and the results of the review, the process is repeated every two to four years.

In Ontario, there's considerable variation in how these methods of assessing quality are done. Some are voluntary, others mandatory and the results may or may not be publicly reported. The table on the next page shows independent quality assessment and

reporting in Ontario's health-care organizations. All have some form of accreditation or regulatory program; long-term care facilities, laboratories and public health facilities are subject to both accreditation and regulation. Some health-care organizations post their results but for the most part, publishing reports from accreditation and regulation reviews is not mandatory.

We are encouraged to see so many health-care organizations go through accreditation, but the gaps in participation concern us and so does the lack of reporting to the public on the results, except for reports on long-term care homes. Our research shows public reporting of performance can influence quality improvement among institutions¹¹ and stimulate health-care providers to strive for higher quality. Depending on where patients live in the province, their choice of accessible, publicly funded providers may be limited. That makes it particularly important to increase the accountability of health-care providers by publishing performance results, so the public can make informed choices about care when they have an option and advocate for improvement when it's needed.

The Health Council of Canada has called for accreditation for health-care organizations as a mandatory condition of public funding, and for accreditation reports to be published to ensure accountability. Ontarians deserve to know the quality we are getting for our investment in publicly funded health-care.

¹⁰ Health Care Renewal of Canada: Clearing the Road to Quality, Health Council of Canada, February 2006.

¹¹ Brown AD, Bhimani H & MacLeod H. (2006) Making Performance Reports Work. *Health Care Papers*; 6: 8-22; Morris K & Zelmer J. Public Reporting of Performance Measures in Health Care. *Canadian Policy Research Networks – Health Care Accountability Papers – No.4*, February 2005; Werner RM & Asch DA. (2005) The Unintended Consequences of Publicly Reporting Quality Information. *JAMA*; 293: 1239-1244; Guru V, Fries SE, Naylor CD, Austin PC, Shrive FM, Ghali WA, Tu JV et al. (2006) Public versus private institutional performance reporting: What is mandatory for quality improvement? *American Heart Journal*; 152: 573-578; Marshall MN, Shekelle PG, Leatherman S & Brooks RH. (2000) The Public Release of Performance Data – What do we expect to gain? A Review of the Evidence. *JAMA*; 283: 1866-1874.

Comparison of Accreditation and Regulatory Inspection Programs for Health Care Organizations in Ontario

Sector	Accreditation		Regulatory enforcement	
	Accreditation	Public reporting	Regulatory enforcement	Public reporting
Hospitals	Mandatory for Ontario's 12+ ¹⁰⁰ teaching hospitals. 95.5 percent of the rest participate.	Optional	None	Not applicable
Long-Term Care facilities	80 percent participate voluntarily. There is a financial incentive to complete the process.	Optional	Mandatory, routine assessment required every year.	Mandatory reporting of findings on ministry website and facility must post inspection findings on site.
Public Health Units	Mandatory for units in the Public Health Research Education and Development Program. ¹⁰¹ About 40 percent of the remaining 32 units participate voluntarily.	Optional	Assessments done in response to complaints and quality issues. 27 percent of public health units have been assessed since 2003. Public Health Capacity Review recommended on-going assessments.	Assessment findings are available on request.
Independent Health Facilities (Radiology clinics, MRI clinics, sleep labs, pulmonary function labs, abortion clinics, etc.)	None	Not applicable	Mandatory, routine assessment required every three to five years (roughly 25 percent are assessed each year). Assessments are also done in response to complaints and quality issues.	No public reporting.
Laboratories	Mandatory	No public reporting.	Mandatory assessments every two or five years, and between in response to complaints and quality issues.	No public reporting.
Community Health Centres (CHCs)	Mandatory	Website lists accredited CHCs.	None	Not applicable
Family Health Teams or other primary-care practices	There was a pilot assessment of three primary health care practices. Whether the project will continue was not known at time of writing.	No public reporting.	None for practices, but 3 to 11 percent of professionals are routinely assessed by their professional college each year.	No public reporting. ¹⁰²
Community Care Access Centres	Voluntary but moving to mandatory.	Optional	Mandatory problem-based assessment (2 out of 42 were assessed in the last five years).	No public reporting.
Community Health Agencies (mental health, home care etc.)	Voluntary	Optional	No reply received to this question.	No reply received to this question.

¹⁰⁰ There are 12 hospitals in Ontario that are Academic Health Science Centres but more hospitals are getting involved in training health professionals. Those that train medical specialists are required by the Royal College of Physicians and Surgeons to participate in accreditation.

¹⁰¹ As with hospitals, public health units that train medical specialists are required by the Royal College of Physicians and Surgeons to participate in accreditation.

¹⁰² At time of writing, legislation was introduced that, if passed, would require the health colleges to provide greater public access through college websites to information on their members including practice restrictions and any disciplinary action.

4.2 IMPROVING HEALTH-SYSTEM PERFORMANCE

Improving performance is a challenge for health-care systems around the world. Some consistently succeed in achieving and maintaining much higher levels of performance, by finding new and better ways of working and providing high-quality care for patients.

Quality systems give their leaders and workers support, information and skills to make improvements, and provide incentives to spread and sustain them. They have recognized that it is possible to increase the overall ability to make improvements at all levels of the system. As a result, they're saving lives, reducing pain and suffering and decreasing waste.

Quality improvement efforts in Ontario have largely been decentralized in pockets of innovation and local improvement. But we could substantially strengthen our ability to improve health care across the province if we had a collective

focus on support for quality improvement. It will take co-ordination and investment of time and money but health-system leaders are looking for ways to make it happen.

The ministry has funded researchers and experts from across the province and the country to work on *Quality by Design*,¹⁰² an initiative that's identifying what a health-care system needs for sustained improvement and suggesting models, approaches and tools to make it happen here. The background research is done. We've learned that getting better results requires strengthening leadership, changing organizational culture, putting the right strategies, policies and structures in place, making sure we have the resources to gather and measure data, emphasizing communication, developing skills and getting clinicians involved in the process.

We know from other countries, such as the two examples profiled in this section, that continuous improvement is achievable. The next phase of *Quality by Design* is to look at some of the highest-performing health-care systems in the world to learn how to develop and sustain one. The final phase is to translate those ideas into tools for increasing our ability to improve quality. We will be reporting in the future on the progress of this initiative.

High quality can't be achieved by dictating change: a commitment to improving care needs to engage everyone in a health-care organization. In Sweden, where county councils plan and budget all health-care services, own and run the facilities and employ the providers, Jönköping County Council has been recognized for its innovative approach to improving care. Jönköping has three top executives. In addition to the usual health-care pairing of a CEO and a clinical director, Jönköping has a quality leader, whose job is to build and sustain improvement through learning and coaching and gathering ideas and tools from elsewhere to use in local care. The administrative, clinical and quality leaders work together to develop and share knowledge about improvement. Working with the financial discipline and clinical standards that every health-care organization must respect, the leaders have built management, clinical and human resource structures that support improvement. Together, the three leaders hold quality-improvement study circuits and they host the "Big Healthcare Group" five days a year to evaluate progress, share lessons and plan for improvement across the system.

¹⁰² Quality by Design is funded by the Ministry of Health and Long-Term Care in partnership with the Department of Health Policy Management and Evaluation at the University of Toronto.

A thin layer of change won't improve quality – it has to be built in at every level, as the Henry Ford Health System in Detroit shows. The non-profit Henry Ford system runs five hospitals, a large medical group practice and community care services and provides care to more than one million residents of southeast Michigan. The system supports physicians in learning improvement skills during their residency training, and in preparation for recertification, giving them tools and data to help them improve. Information and feedback are at the heart of the Ford program: physician leaders get data on the work of their colleagues, and feedback about their performance, so they can build them into regular discussions with co-workers, and make sure everyone is working toward their program and corporate goals. Meeting goals is built into physician leaders' accountability and there are financial incentives to do so. This feedback means physicians better understand the work they do and can see how changes to care improve patient outcomes. The system also gives units or groups financial rewards for good performance based on how the system has scored on several measures, including patient satisfaction and financial indicators. It's proven to be an effective way to encourage teams of nurses, physicians and managers to work together toward common goals and celebrate and reinvest in improvement.

4.3 IMPROVING HEALTH CARE PRACTICE

In last year's report we observed that our health system doesn't do well at adopting the good ideas research produces. When it comes to individual practice, section 3.2.1 of this year's report found evidence that health professionals do not always use the best available knowledge. It's not that doctors or nurses or other health-care providers want to provide sub-optimal care. They often face a number of barriers to using best practices. We therefore looked into the reasons why these gaps happen, and what can be done and is being done to reduce them.

4.3.1 Barriers to using best practice

To understand the reason for the gaps between proven best practice and what people actually do, we looked at research, talked with a number of experts and did focus groups with nurses, pharmacists and physicians. Some of our findings are specific to certain professions, but we found common themes:¹⁷⁰

1. **Individual practitioner barriers:** These include information overload, lack of time, lack of awareness of relevant information, or access to it, or acceptance of it, inadequate or no measures for judging performance and education needs, and lack of training in critical appraisal, knowledge management and application.
2. **Inadequate data to inform clinical performance:** Recent research shows health practitioners are not good at assessing their own educational needs without objective feedback from others about their performance. They need timely feedback or data on performance, to guide learning, change and improvement.¹⁷¹ Again, the lack of timely, quality data in the province gets in the way of quality improvement.
3. **Ineffective education and communication efforts:** Continuing education programs are supposed to increase professional competence so patients get better care. But the approaches we use don't work well. It's agreed¹⁷² that passive strategies, such as printed material and large classroom-style

¹⁷⁰ System-wide barriers (funding, staffing, access, lack of resources and organizational constraints) are not addressed here.

¹⁷¹ Davis DA, Maxmanian PE, Fordis M, Harrison RV, Thorpe KE & Perrier L. (2006) Accuracy of Physician Self-assessment Compared with Observed Measures of Competence – A systematic review. JAMA; 296 (9): 1094-1102.

¹⁷² There are differences in the rigour and type of literature on educational and other change strategies for physicians, nurses and pharmacists. Most studies focus on doctors.



educational sessions, are less effective than more active methods. Despite some efforts,¹⁰⁸ passive methods still characterize the majority of continuing education events. We don't even follow the best-practice recommendations for encouraging use of best practices! What works best is to enable and reinforce change by integrating new approaches with practice, through feedback, reminders and interactive workshops.

4. Unco-ordinated educational efforts and confused messages: Interviews indicated that continuing education efforts are hit and miss, not planned for objectively chosen needs. The different sources of education — professional societies, colleges, associations, health-sciences schools, commercial entities and others — often deliver conflicting and confusing messages.

5. Information overload: It is an ongoing challenge for health-care providers to integrate vast volumes of new scientific information to remain current and acquire the skills needed to make clinical decisions for their patients.¹⁰⁹

4.3.2 Support for putting evidence into practice

Although the continuous quality improvement cycle — plan-do-check-act — seems simple, there is considerable theory behind it. To bring change to a process or an organization requires the ability to:

- Assess and translate new ideas into practice;
- Measure effective performance;
- Analyze differences in care and what causes them;
- Co-ordinate strategies and messages across disciplines and systems; and
- Continually evaluate the outcome.

Do we have the ability to do all this in Ontario today?

ASSESSING AND TRANSLATING NEW IDEAS INTO PRACTICE:

Health practitioners need help to overcome information overload and the challenges of absorbing large volumes of evidence; new ideas need to be assessed and interpreted so they can put them into practice. The Registered Nurses Association of Ontario does this in a few practice areas in its Nursing Best Practice Guidelines.¹¹⁰ The Guidelines Advisory Committee, a joint initiative of the ministry and the Ontario Medical Association, has reviewed hundreds of clinical-practice guidelines and produced over 70 best-evidence summaries. Cancer Care Ontario regularly produces and updates guidelines for prevention, screening and treatment of cancer. Now we need a comprehensive, multi-disciplinary initiative to review, rate and share key messages from research and co-ordinate messages about what new ideas should be adopted.

MEASURING EFFECTIVE PERFORMANCE:

To improve performance, we have to be able to measure what we're doing before changes are introduced and then measure the difference the changes make. We noted some progress in improving measurement of health-care performance in section 3.7.3, but we need much better data that would give us information on individual performance.

¹⁰⁸ Examples include:

- interactive small groups by the College of Family Physicians of Canada - Premi J, Shannon S, Harnwick K, Lamb S, Wakefield J & Williams J. (1994) Practice based small group CME. *Academy of Medicine*; 69 (10): 800-2
- practice-based learning in medicine
- inclusion of continuing education methods which stress learning portfolios in nursing

¹⁰⁹ Bloom BS. (2005) Effects of continuing medical education on improving physician clinical care and patient health: A review of systematic reviews. *International Journal of Technology Assessment in Health Care*; 21(3): 380-385.

¹¹⁰ For example: Woman Abuse: Screening, Identification and Initial Response (2005); Promoting Asthma Control in Children (2004); Best Practice Guideline for the Subcutaneous Administration of Insulin in Adults with Type 2 Diabetes (2004); Breastfeeding Best Practice Guidelines for Nurses (2005).

ANALYZING DIFFERENCES IN CARE AND WHAT CAUSES THEM:

In Ontario, the Institute for Clinical Evaluative Sciences reviews differences in health care¹⁹⁰ and has done some studies on using feedback to providers to improve performance.¹⁹¹ But aside from this work and some by Cancer Care Ontario, we have no on-going capacity to examine gaps in the level of care people get and what causes them or what prevents the best practices from being used everywhere.

CO-ORDINATE STRATEGIES AND MESSAGES ACROSS DISCIPLINES AND SYSTEMS:

As we've discussed throughout this report, there are a number of efforts underway to improve performance in the health system. But we need to make changes to the system and in what individuals do at the same time, to make sure what we are doing is integrated and effective. In Section 5 we'll discuss best practices in chronic disease care. But we also need to look at what in the health system is preventing or encouraging best practice. We've discussed accountability for quality — what if we made accreditation of organizations depend on how well professionals working in them adopt best practices? Should re-licensing of professionals depend on their use of best practices?

We could make people follow best practices more if things like automatic reminders, auditing and feedback were in place to let practitioners know how they are doing compared to their colleagues.

CONTINUALLY EVALUATING THE OUTCOME:

Any initiative to improve performance must be evaluated, fine-tuned and evaluated again to ensure it actually achieves the intended improvement — ultimately, better health for Ontarians. Local health integration networks may be a way to consolidate and co-ordinate changing the behaviour of caregivers. The networks can work with the community and providers to define priorities and develop plans for good care that cross the boundaries of institutions and integrate efforts to adopt best practices.

4.4 A MODEL FOR CONTINUOUS QUALITY IMPROVEMENT — ONTARIO'S WAIT TIME STRATEGY

Ontario's Wait Time Strategy is an example of a province-wide model for improving performance across a number of different health-care organizations. As we reported in section 3.1.2, access to the five health services the strategy was aimed at — cancer care, cardiac care, joint replacements, imaging and cataract surgery — is improving. But why?

4.4.1 The elements for success

The Wait Time Strategy began with a clear policy objective — to reduce waits and increase access to five major health services. The strategy to do that was clear:

- Significantly increase the number of procedures to reduce the backlog that has developed over the last decade;
- Invest in new, more efficient technology and extend the hours of operation;
- Standardize best practices for medical and administrative functions to improve efficiency and patient flow;



¹⁹⁰ Found at: www.ices.on.ca.

¹⁹¹ For example — Hux J, Melady M & DeBoer D. (1999) Confidential prescriber feedback and education to improve antibiotic use in primary care: a controlled trial. CMAJ; 161(4): 388-392.



- Review processes so operating rooms, critical-care facilities and human resources are all used to their full potential; and
- Collect and report accurate and up-to-date data on a public-access website to allow better decision-making and increased accountability on wait times.

The Wait Time Strategy has benefited from strong leadership and involving physicians in the planning. Work in each area has been guided by expert panels (teams of leading physicians, other practitioners and senior managers) that analyzed the situation and developed recommendations for improvement.²⁹¹ The panellists played key roles introducing the recommendations in their own hospitals and guiding others. Special teams coached hospitals to help them improve their care. Formal agreements and extra funding helped ensure the changes would happen, without reducing care in other areas.

The strategy worked partly because of the Wait Time Information System. It was critical to have accurate information to manage waits. People can log on to www.ontariowaittimes.com to find out wait times in their area. It also tells each hospital where it stands compared to its peers, driving the push to do better.

The strategy is encouraging improvement and further innovation. Just a few examples:

- St. Joseph's Healthcare Hamilton has partnered with other hospitals in the Hamilton Niagara Haldimand Brant Local Health Integration Network to create a centralized referral system for cataract surgery.
- Hospitals and community care access centres in the Central West LHIN and the North Simcoe Muskoka LHIN are doing the same thing for joint replacements.
- The Champlain regional cancer plan, focused on the Ottawa Hospital, is a partnership among all the cancer hospitals in Eastern Ontario to improve quality and decrease wait times.

4.4.2 Impact beyond the five wait time priorities

Some people worry focusing on five priority areas must take resources away from other areas of health care. These "unintended consequences" are a concern in any improvement project and need to be monitored and addressed. A recent Canadian Institute of Health Information study measured growth of the five priority procedures and the number of other types of surgery.²⁹² Adjusting for age and population growth, it showed significant growth in the priority procedures over the last year while the number of patients receiving other types of surgeries remained relatively stable overall. However, no study has yet to measure the impact on waiting times for all other surgeries or the stresses on health human resources and facilities affecting other health programs.

Meanwhile, the Wait Time Information System has been approved to measure all types of surgery,²⁹³ so the impact of the strategy on surgery overall can be monitored. It will also provide data for improving quality in all the areas.

The Wait Time Strategy can benefit other types of care because of how it used "care mapping," which tracks care from diagnosis through surgery, recovery and critical care, to figure out the most efficient route to follow in looking after patients. That's led to recommendations for improvements to make all surgery more efficient.²⁹⁴ Introduction of the surgical information system and the critical care information system means we should know the impact of those changes in the next year.²⁹⁵ Expert panels on pediatrics, trauma and diabetes are preparing reports on the possibility of expanding the Wait Time Strategy.

²⁹¹ For a detailed review, see Trypuc J, Hudson A & Macleod H. (2006) Expert Panels and Ontario's Wait Time Strategy. *Healthcare Quarterly* 9 (3): 43-49.

²⁹² Surgical Volume Trends Within and Beyond Wait Time Priority Areas. Canadian Institute of Health Information, 2007. Found at: http://secure.cihi.ca/cihiweb/en/downloads/surgical_volume_trends_jan2007_e.pdf. Accessed: February 5, 2007.

²⁹³ Hudson A, personal communication, November 29, 2006.

²⁹⁴ For a detailed review, see Trypuc J, Hudson A & Macleod H. (2006) The Pivotal Role of Critical Care and Surgical Efficiencies in Supporting Ontario's Wait Time Strategy. *Healthcare Quarterly* 9 (4): 37-45.

²⁹⁵ Hudson A, personal communication, November 13, 2006.

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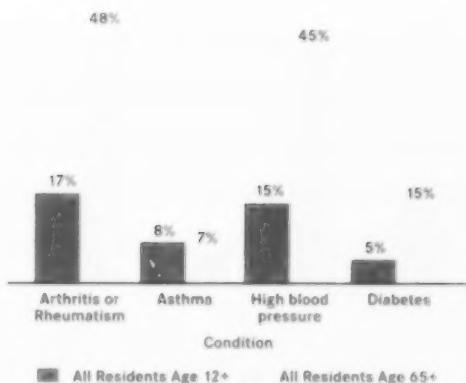
CHRONIC DISEASE MANAGEMENT IN ONTARIO



It's no surprise the public and the media tend to focus on the emergency department and the operating room as the essence of the health-care system. They are sites of drama and action — and the health system was designed to deal with acute illnesses such as appendicitis and epidemics or with injuries from car accidents or the like. But the real story of modern health care is the rise of chronic diseases, the illnesses people live with for years, such as heart disease and diabetes. Based on self-reports, about one in three Ontarians (all ages) have one or more chronic diseases.³⁰ For those over the age of 65 across Canada, about 80 percent have one chronic disease, and of those, about 70 percent suffer from two or more chronic diseases.³⁰

At least 60 percent of Ontario's health-care costs are due to chronic diseases.³⁰ The sad truth is, however, that much chronic disease could be prevented and we could do a much better job of managing them. The quality council decided to look at how we're dealing with chronic disease, by focusing on patients who are mainly followed through primary health-care practices, not specialty centres. (We're not looking at the cancer system in this report).

Self-reported Prevalence of Select Chronic Conditions for Ontario Population, 2005



Source: *Health Indicators Report*, Statistics Canada, 2005. Data derived from the Canadian Community Health Survey (cycle 3.1, 2005) (Statistics Canada).

³⁰ Health Council of Canada, 2007. Why health care renewal matters: Lessons from diabetes - Toronto, Ontario. Data derived from: Canadian Community Health Survey, 2005, Statistics Canada - Ottawa.

³¹ Gilmour H & Park J. (2005) Dependency, chronic conditions, and pain in seniors. *Health Reports* 1:21-31. Found at: <http://www.statcan.ca/english/freepub/82-003-SIE/2005000/pdf/82-003-SIE20050007443.pdf>. Accessed: November 2, 2006. The article's authors included the following conditions in arriving in these figures: arthritis or rheumatism, asthma, Alzheimer's disease or other dementia, back problems, bowel disorder/Crohn's disease/colitis, cancer, cataracts or glaucoma, chemical sensitivities, bronchitis/emphysema/chronic obstructive pulmonary disease (COPD), chronic fatigue syndrome, diabetes, effects of stroke, epilepsy, fibromyalgia, heart disease, mental illness, migraine, thyroid condition, stomach/intestinal ulcers, and urinary incontinence.

³² There is no recent comprehensive study of the cost of chronic disease in Ontario but a recent study in Nova Scotia concluded that 60 percent of the province's health-care costs were for chronic diseases. Colman R, Hayward K, Monette A et al. The cost of chronic disease in Nova Scotia. *GPI Atlantic*. Found at: <http://gov.ns.ca/health/downloads/chronic.pdf>. Accessed: October 2, 2006. In 2004, the US Centers for Disease Control concluded that persons with chronic conditions consumed 75 percent of the costs of the system. Found at: <http://www.cdc.gov/nccdphp/burdenbook2004/>. Accessed: October 2006. The higher figures could be due to some of the persons with chronic conditions developing unrelated acute problems while the lower figure may be related to the exclusion of acute problems (such as falls in the elderly) which are often related to chronic problems.

5.1 CHRONIC DISEASE — A PRIMER

Most acute diseases are sudden, with a single cause. They're relatively easy to diagnose and are often curable. Patients with acute illness are often very sick and unable to work or fulfill social roles. In contrast, chronic diseases typically start slowly, have multiple causes, may not have symptoms and are not curable, although they can certainly be treated and complications prevented. Patients with chronic

illnesses are usually able to work and maintain family roles, but they may require support to do so.

People with chronic illnesses have to take an active part in managing their disease.¹⁰⁰

A healthy lifestyle (consisting of a clean environment, nutritious food, physical fitness, supportive family and social relationships, and meaningful, safe work) could prevent over 80 percent of coronary heart disease¹⁰¹ and type 2 diabetes (which makes up 90 percent of diabetes cases).¹⁰²

It would prevent more than 85 percent of lung cancer and chronic obstructive lung disease (such as emphysema).¹⁰³ If we could prevent all those cases, we could free up approximately 2,900 hospital beds a year in this province.¹⁰⁴

However, the patterns of health and illness in Ontario are the result of a complex mix of factors, often referred to as the "social determinants of health."¹⁰⁵ They're a range of factors, from income and social status, education and social support to the physical environment, healthy habits, culture and health services that combine with biology and genetics to shape each individual mentally and physically.

As we discussed in section 3.5, Aboriginal Ontarians, who as a group generally have less income, education and employment and often live in a poor physical environment, have higher rates of most chronic illnesses including heart disease, chronic lung diseases, diabetes, lung cancer, and depression. Immigrant Ontarians have higher rates of diabetes. Low-income Canadians are 50 percent more likely than high-income to report having a chronic disease and are three times as likely to report having two or more chronic diseases.¹⁰⁶

However, even among better-off Canadians, chronic disease is a threat. People who are obese are much more likely to suffer chronic diseases and, as we observed in our discussion of population health (section 3.9), one in three Ontarians over 18 is overweight and 15 percent are obese. That's a considerable increase from earlier generations, although the rate has remained steady over the past five years. It is sobering to think how much personal suffering and public expense could be avoided if we did more to help people stay healthy.

¹⁰⁰ This is also true for people who live with other on-going conditions, such as pain or discomfort. As reported in the 2005 Canadian Community Health Survey, 11 percent of all Ontarians and 20 percent of those aged 65 and over experience pain or discomfort that interferes with daily living.

Stampfer MJ, Hu FB, Manson JE et al. (2000) Primary prevention of coronary heart disease in women through diet and lifestyle. *New England Journal of Medicine*, 343: 16-22.

Hu FB, Manson JE, Stampfer MJ et al. (2001) Diet, lifestyle, and the risk of type 2 diabetes mellitus in women. *New England Journal of Medicine*, 345: 790-797.

Doll R, Peto R, Wheatley K et al. (1994) Mortality in relation to smoking: 40 years' observations on male British doctors. *British Medical Journal*, 309: 901-911.

Tabulations constructed from data from the Canadian Institute for Health Information. Found at: http://secure.cihi.ca/cihiweb/disPage.jsp?cw_page=statistics_results_topic_hospital_e&cw_topic=Health%20Services&cw_subtopic=Hospital%20Discharges. Accessed: November 10, 2006. These conditions were responsible for 750,000 hospital days or roughly 2,870 hospital beds (at 90 percent capacity).

¹⁰⁵ Dennis Raphael (Ed) (2004). *Social Determinants of Health: Canadian Perspectives*. Edited by: Canadian Scholars' Press. Canadian Community Health Survey, 2005. Statistics Canada, Ottawa.

5.2 ASSESSING ONTARIO'S PERFORMANCE IN CHRONIC DISEASE MANAGEMENT

To help us assess how well we're handling chronic disease, we used the Assessment of Chronic Illness Care instrument²⁰ developed by the Group Health Cooperative of Puget Sound in Seattle. The assessment tool is based on the Chronic Care Model also developed by Group Health²¹ which says there are six essential elements in a system that does high-quality chronic disease management: the community, the health system, self-management support, delivery-system design, decision support, and clinical information systems. Properly managed, these elements should improve interaction between patients (who are actively involved in their own care), and providers who have the resources and skills needed to help them be as well as possible. The model was refined for Ontario to

incorporate key differences of the Canadian system.²² The Ontario version also notes the importance of healthy public policy, supportive environments and community action, and is used for planning chronic disease programs.

The Assessment of Chronic Illness Care instrument was developed to guide improvements in managing chronic disease and has been used by health systems in several countries.²³ We report on each of the main categories: clinical information systems, community linkages, self-management support, decision support, delivery system design, integration of the Chronic Care Model and organization of the health-care system. To understand the instrument, we use real case studies from Ontario to show how it should be done, then look at how the Ontario health system overall is doing on chronic illness care. For the last category, organization of the health-care system, we had to look further a field to find a best practice example.

Ontario's Chronic Disease Management and Prevention Framework



MacColl Center for Health Innovation - Assessment of Chronic Illness Care - version 3.5. Found at: http://www.improvingchroniccare.org/ACIC%20docs/ACIC_V3.5.doc. Accessed: September 12, 2006.

MacColl Center for Health Innovation - Chronic care model. Found at: <http://www.improvingchroniccare.org/change/model/components.html>. Accessed: October 12, 2006.

Barr V, Robinson S, Marin-Link B et al. (2003) The expanded chronic care model: An integration of concepts and strategies from population health promotion and the chronic care model. *Healthcare Quarterly*, 7 (1).

The Saskatoon and Calgary health regions have assessed their chronic disease care with it and the Saskatchewan Health Quality Council is using the ACIC to rate practices for its chronic disease quality improvement collaborative.



5.2.1 Clinical information systems

Good information is critical in managing chronic illness. People in health care like to say "if you can't measure it, you can't manage it." And, as in all aspects of health care, Ontario's lack of electronic patient records causes real problems in measuring and therefore in managing chronic disease. The first step in measurement for chronic disease care is a registry, a list of patients with particular conditions.²²⁰ Registers provide essential information²²¹ such as whether a patient is reaching goals the treatment is aimed at and which patients aren't receiving care according to guidelines, or aren't responding as expected. Computerized registries can also generate reminders for caregivers on what a patient's care plan is, and what needs to be done and send reminders to patients on care tasks as well. Registries can also track high-risk patients, highlighting those who need more intensive management.

SAULT STE. MARIE GROUP HEALTH CENTRE AND STONECHURCH FAMILY HEALTH CENTRE: ELECTRONIC RECORDS ELECTRIFY PRACTICES

The Sault Ste. Marie Group Health Centre has delivered innovative services for over 40 years: 10 years ago it recognized the need for better information management. The centre has more than 60,000 patients, 38 family doctors and 27 specialists (18 full time and nine associate and visiting), eight nurse practitioners, 100 registered nurses, and 50 other health professionals. It introduced a comprehensive electronic medical record in 1997.²²²

In 1998, the centre began to keep track of its diabetes patients and provide feedback to their health-care

providers with a scoring system it calls "Good Health Outcomes in Diabetes." The score measures nine care processes and three aspects of health. At the beginning, care scored 46 percent; now it's 62 percent — not perfect, but a lot better than most other centres in Canada or the U.S., and not bad even compared with its more famous cousin, the Group Health Cooperative in Seattle.²²³

In another corner of the province, Hamilton's Stonechurch Family Health Centre, affiliated with McMaster University, uses an electronic medical record developed by family doctor Dr. David Chan and other McMaster colleagues.²²⁴ Named OSCAR, for **O**pen **S**ource **C**linical **A**pplication **R**esource, it keeps records of appointments, diagnoses, meetings, prescriptions, lab and imaging tests. It also gives online "decision support," guiding caregivers through the steps of treatment options and flags patients' charts when a service should be given. OSCAR can list patients by diagnosis or medication — among other benefits that allows the centre to act quickly as, for instance, when the anti-arthritis drug Vioxx was recalled in 2004 and most doctors had to go through charts one by one to identify patients at risk.

OSCAR's server is secure although the system can get applications and information on the internet. Also, because OSCAR is a non-proprietary product based on Linux, the coding is open source and free to all to use and modify. It's being used by groups in B.C., Brazil, Australia, and Harvard University and a patient version, called OSCAR Citizen is about to be released. It will permit a patient to construct his or her own chart²²⁵ and have health-care providers add their findings directly to it through a secure internet connection.

²²⁰ Metzger J. (2004) Using Computerized Registries in Chronic Disease Care. *California Healthcare Foundation*; Schmittid J, Bodenheimer T, Solomon NA et al. (2005) The Prevalence and Use of Chronic Disease Registries in Physician Organizations: A National Survey. *Journal of General Internal Medicine*; 20: 855-858; Stroebe RJ, Scheitel SM, Fitz JS et al. (2002) A randomized trial of three diabetes registry implementation strategies in a community internal medicine practice. *Joint Commission Journal of Quality Improvement*; 28: 441-50.

²²¹ Schmittid J, Bodenheimer T, Solomon NA et al. (2005) The Prevalence and Use of Chronic Disease Registries in Physician Organizations: A National Survey. *Journal of General Internal Medicine*; 20: 855-858.

²²² Murray D. The Group Health Centre Model — working to improve continuity, comprehensiveness and responsiveness in primary care. Presentation to the Research Group on Equity of Access and Organization on Primary Health Care Services. Found at: <http://www.greas.ca/publication/pdf/davidmurray.pdf>. Accessed: November 2, 2006.

²²³ Found at: <http://www.oscarmcmaster.org/oscar/app-modules>. Accessed: October 2006.

²²⁴ Chan D. Free/Libre Open Source Software (FLOSS) in Health Care: showcase of OSCAR, a Canadian product. Presentation. November 12, 2006; Found at: www.oscarmcmaster.org. Accessed: October 2006.

²²⁵ Found at: <http://www.oscarmcmaster.org/oscar/app-modules>. Accessed: October 2006.

CLINICAL INFORMATION SYSTEMS: ONTARIO LAGS BEHIND OTHER JURISDICTIONS

In a recent survey of seven countries, Canadian family physicians were least likely to have electronic record systems and were least likely to be able to generate registries of patients with specific diagnoses.²²⁶ Roughly half the Canadian respondents said it was very difficult or impossible to generate lists of medications taken by patients or identify patients who were overdue for chronic disease or preventive care. In the United Kingdom, less than five percent of family doctors have difficulty generating patient lists.²²⁷

Some physicians might claim they're managing patients well without registries but when physician practices are formally assessed, it's often found that care doesn't follow guidelines.²²⁸ One physician participating in the Vancouver Island Health Authority's primary health care collaborative²²⁹ said he felt he was managing his chronically ill patients appropriately before he actually had the data on them, which showed he was performing at only about 50 percent effectiveness²³⁰ compared to guidelines.

A Canadian survey of asthma patients showed both patients and providers can be fooled into thinking they're doing better than they are.²³¹ Fifty-seven percent of asthma patients in the survey were considered to have poor control of their disease and 50 percent needed urgent care for out-of-control asthma in the previous year. Yet 91 percent of patients thought their disease was well controlled and 77 percent of family doctors and 90 percent of specialists surveyed said they were usually able to achieve optimal control in their patients.²³² In section 3.4 we noted that Ontarians report high satisfaction with their care. However, the reality is high rates of patient satisfaction frequently mask poor quality care — and neither providers nor patients know it.

5.2.2 Community action and linkages

As discussed in section 3.9 of this report, non-medical determinants of health such as poverty and housing have at least as much impact on the overall health of the public as the health-care system. They're also important for individual patients. It ultimately doesn't matter if a doctor makes a difficult diagnosis if the patient can't afford to pay for the medication. That means the health system should deal with non-medical barriers to treatment by working with community organizations that can provide some of the resources patients need — from housing to help finding food and work. Regional health plans should have connecting with community services built into their guidelines for care.



²²⁶ Schoen C, Osborn R, Huynh PT et al. (2006) On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Affairs*, 11:w555-w571. Found at: <http://content.healthaffairs.org/cgi/content/full/hlthaff.25.w555/DC1>. Accessed: November 2, 2006.

²²⁷ Banerjee S, Shamash K, MacDonald AJD et al. (1996) Randomised trial of effect of intervention by psychogeriatric team on depression in frail elderly people at home. *British Medical Journal* 313: 1058-1061.

²²⁸ Hayward RSA, Guyatt GH, Moore K-A et al. (1997) Canadian Physicians' attitudes about and preferences regarding clinical practice guidelines. *Canadian Medical Association Journal* 156: 1715-1723; Hutchison B, Woodward CA, Norman GR et al. (1998) Provision of preventive care to unannounced standardized patients. *Canadian Medical Association Journal* 158: 185-193.

²²⁹ Vancouver Island Health Authority Chronic Disease Plan. June 2006. Found at: <http://www.viha.ca/NR/rdonlyres/1C51DA78-06F6-4D84-A77C-794474337BA0/0/CDMPPlanFinal.pdf>. Accessed: November 20, 2006.

²³⁰ Wray G. The BC CDM Collaborative: Background, lessons learned, and a physician's experience - First learning session of the second Saskatchewan Health Quality Council primary chronic disease management collaborative, Saskatoon. Presentation. November 17, 2006

²³¹ Chapman KR, Ernst P, Grenville A et al. (2001) Control of asthma in Canada: Failure to achieve guideline targets. *Canadian Respiratory Journal* 8 (A): 35A-40A.

THE LONDON INTERCOMMUNITY HEALTH CENTRE: RESOURCES TO COPE WITH DIABETES

During the 1990s, the London InterCommunity Health Centre developed a diabetes program to deal with the special needs of the city's large Latin American population which has a high rate of diabetes.²³² The program also focuses on other groups with high rates of diabetes, including people with serious mental illness. The program screens high-risk groups, works to prevent them from getting diabetes in the first place and — where they do develop it — offers follow-up care to reduce complications. Because exercise and weight loss are important in preventing and controlling diabetes, the centre also sponsors a walking program and regular walking events and monitors weight loss. The centre has an electronic record for each patient and keeps running calculations of the program's effectiveness, which show excellent diabetes control.

But according to a nurse practitioner, while patients sometimes need to see a professional such as the dietician, about 75 percent of the time, the biggest issues they face are social rather than strictly medical. After an initial nursing assessment, many patients need to see a community health worker or a social worker. Community health workers, some of whom came to Canada from Latin American countries, say they can often trace uncontrolled diabetes to social stresses and must help their clients deal with problems from illiteracy to landlord problems.

COMMUNITY ACTION AND LINKAGES: ONTARIO NEEDS MORE ACTION

The London InterCommunity Health Centre is an exception; for the most part Ontario's health system does a poor job linking people with chronic diseases to community resources. Few practices assess their patients for psychological, social, and economic barriers to care. One study of arthritis patients found that before the study, primary health-care practices made no referrals to the Arthritis Society and less than 10 percent of patients were given the society's toll free number.²³³ Fifty-nine percent of Canadians who reported being depressed in the previous year did not

receive mental health services despite over 90 percent of them having seen a family doctor in the preceding 12 months.²³³

5.2.3 Self-management support

"Self-management" is the phrase we use for involving chronic disease patients in their own care. Many chronic diseases must be fairly closely watched and certain measures — such as weight in people with congestive heart failure, or blood-sugar levels in diabetics — regularly checked. Generally, the more closely patients are monitored, the more carefully their care can be tailored to their daily needs, which is key to keeping chronic disease patients from having a health crisis. It would be impossible for the health-care system to monitor patients as closely as they can monitor themselves when they are properly educated about self-care. They need to learn how to adjust their own medications and lifestyles for the day-to-day and hour-by-hour changes in their diseases. Patient self-management can improve results and reduce cost for arthritis, asthma, heart disease and other disorders.²³⁴ Learning self-management means learning structured problem solving and decision making and how to use resources and form partnerships with the health-care system.²³⁵ Ideally self-management needs should be part of regular follow-up visits.

THE STONECHURCH FAMILY HEALTH CENTRE SUPPORTS PATIENT SELF-MANAGEMENT

The Stonechurch Family Health Centre in Hamilton recently tested a rehabilitation project for patients over 45 with chronic illnesses who had at least four visits to the family practice in the previous year. The patients in the intervention group were assessed by an occupational therapist and a physiotherapist, then individual care programs were developed and goals for exercise, nutrition, and stress management were added to their care plans. By the end of the two-year study, the rehabilitation patients had had fewer falls and their caregivers reported less stress. The investigators estimated that participants used roughly \$450 less hospital care than the patients given routine care.²³⁶

²³² See the website for the London InterCommunity Health Centre: <http://www.lihc.on.ca/>, or the Latin American Diabetes Program: <http://www.pldiabetes.com/>.

²³³ Wang JL, Langille DB & Patten SB. (2003) Mental health services received by depressed persons who visited general practitioners and family doctors. *Psychiatric Services* 54: 878-883.

²³⁴ Bodenheimer T, Lorig K, Holman H et al. (2002) Patient self-management of chronic disease in primary care. *Journal of the American Medical Association*; 288: 2469-2475; Menéndez-Jándula B, Souto JC, Oliver A et al. (2005) Comparing Self-Management of Oral Anticoagulant Therapy with Clinic Management: A Randomized Trial. *Annals of Internal Medicine*; 142: 1-10.

²³⁵ Bodenheimer T, Lorig K, Holman H et al. (2002) Patient self-management of chronic disease in primary care. *Journal of the American Medical Association*; 288: 2469-2475.

²³⁶ Letts L & Richardson J, personal communication, October 26, 2006.



ONTARIO SELF-MANAGEMENT SUPPORT DOESN'T MAKE THE GRADE

Despite these examples of the difference self-management makes for the chronically ill, we are doing poorly at encouraging it. The 2004 Ontario Ministry of Health Diabetes Task Force estimated that only 28 percent of people with diabetes have access to structured diabetes education and care.²⁵⁷ Less than 50 percent of providers gave congestive heart failure patients written instructions about monitoring their weight, which is a keystone of self-management for them.²⁵⁸

The list goes on — less than 50 percent of Canadian arthritis patients have had their ability to cope with their disease assessed or had a discussion of nutrition and diet²⁵⁹ and less than a quarter of them reported being given any information on their disease, including pamphlets.²⁶⁰ Asthma patients fare no better — they are poorly educated about their disease²⁶¹ and 85 percent of patients who were judged to have poorly controlled

asthma thought their disease was controlled adequately or better. Only 20 percent of patients reported receiving a written care plan and only half of them recalled what steps they were to take if their asthma flared up.²⁶¹ The majority of Canadian asthma patients have poorly controlled disease.

A Change Foundation survey of 66 chronic disease management programs in Ontario showed that less than 30 percent involved patients and families directly in planning.²⁶² According to an international survey, Canadian physicians were the least likely to develop written care plans for patients with chronic illness²⁶³ and Canadian patients were the least likely to say that hospitals involved them in their care.²⁶⁴ It doesn't have to be this way: some other health systems support patient self-management strongly. The National Health Service in the U.K. runs the Expert Patients' Programme, which offers self-management training to all patients with chronic disease.²⁶⁵

²⁵⁷ Diabetes Task Force. Report to the Ministry of Health and Long-Term Care. September 2004. Found at: http://www.health.gov.on.ca/english/public/pub/ministry_reports/diabetes_taskforce/diabetes_taskforce.pdf Accessed: October 14, 2006.

²⁵⁸ Sharing Accountability for patients: lessons from CHF. April 2005. The Change Foundation. Found at: [http://www.changefoundation.com/tcf/TCFBul.nsf/c0f92439bd3e9bb6852565e500033ec6/5eea2948515d406b8525708f0053dec9/\\$FILE/c hf-xccc-act-report-final%5B1%5D.pdf](http://www.changefoundation.com/tcf/TCFBul.nsf/c0f92439bd3e9bb6852565e500033ec6/5eea2948515d406b8525708f0053dec9/$FILE/c hf-xccc-act-report-final%5B1%5D.pdf). Accessed: November 25, 2006.

²⁵⁹ Glazier RH, Badley EM, Lincker SC, Wilkins AL & Bell MJ. (2005) Getting a Grip on Arthritis: an educational intervention for the diagnosis and treatment of arthritis in primary care. *Journal of Rheumatology* 32: 137-42.

²⁶⁰ Rachlis MM (2005) *Prescription for Excellence*. Harper Collins Canada. Toronto. Page 310.

²⁶¹ Chapman KR, Ernst P, Grenville A et al. (2001) Control of asthma in Canada: Failure to achieve guideline targets. *Canadian Respiratory Journal* 8 (A): 35A-40A.

²⁶² Wong J, Gilbert J & Koburn L. Seeking program sustainability in chronic disease management: the Ontario experience. The Change Foundation. May 2004. Found at: [http://www.changefoundation.com/tcf/TCFBul.nsf/c0f92439bd3e9bb6852565e500033ec6/004e81adb65e173c85256e940046509a/\\$FILE/Disease%20Management%20Sustainability.pdf](http://www.changefoundation.com/tcf/TCFBul.nsf/c0f92439bd3e9bb6852565e500033ec6/004e81adb65e173c85256e940046509a/$FILE/Disease%20Management%20Sustainability.pdf). Accessed: November 25, 2006.

²⁶³ Schoen C, Osborn R, Huynh PT et al. (2006) On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Affairs* 11: w555-w571.

²⁶⁴ Schoen C, Osborn R, Huynh PT & et al. (2005) Taking the pulse of health care systems: Experiences with health problems in six countries. *Health Affairs* 10: w5-509-w5-525.

²⁶⁵ UK National Health Service Expert Patients' Programme. Found at: <http://www.expertpatients.nhs.uk/public/default.aspx>. Accessed: October 12, 2006.

5.2.4 Decision support

Most Ontario patients receive most of their health care from family doctors, but most of the province's expertise on chronic-illness care is in specialty units in hospitals, especially university teaching hospitals. There is not necessarily any connection between them. Some research indicates that complicated patients get better care from specialists.²⁴⁶ But other research shows patients cared for by specialists don't get the preventive care of patients with primary health care follow-up²⁴⁷ or as good care for other health problems.²⁴⁸

Some people are so sick and unstable or have such rare illnesses that they need specialty units. But most people with chronic illnesses just need better integration of specialist care with primary health care, combining the

specialized knowledge they need for their chronic condition with continuing care from a generalist. The benefits of this kind of blended care are clear: congestive heart failure patients who are cared for by family doctors are less likely to be admitted to hospital or die if they've had a specialist consultation.²⁴⁹ Multidisciplinary teams of doctors, nurses, and other professionals have been found to provide better-quality care to nursing home residents,²⁵⁰ congestive heart failure patients,²⁵¹ rheumatoid arthritis patients,²⁵² people with mental illness,²⁵³ and young people with physical disabilities.²⁵⁴

But too often, those important links between primary and specialty care aren't made. In previous years, family doctors had more routine interaction with specialists because many cared for their patients when they were in hospital. However, fewer Ontario family doctors now manage patients in hospital.²⁵⁵ Perhaps in part because of that lack of contact, Canadians wait longer for specialist referrals than patients in other countries.²⁵⁶ Without that contact, family doctors do not get specialist support in following guidelines. That may account for why Canadian diabetic patients are less likely to get care according to guidelines than patients in other countries,²⁵⁷ or why one in seven Ontario patients newly diagnosed with heart failure is re-admitted to hospital within 90 days of discharge and nearly one-quarter are re-admitted within one year,²⁵⁸ more than should be if guidelines are followed carefully. (Section 3.2.3 documents other problems with hospital readmissions).



- ²⁴⁶ Ayanian J, Hauptman P, Guadagnoli E et al. (1994) Knowledge and practices of generalist and specialist physicians regarding drug therapy for acute myocardial infarction. *New England Journal of Medicine*, 331: 1136–1142; Ward M, Leigh J, Fries J et al. (1993) Progression of functional disability in patients with rheumatoid arthritis: associations with rheumatology subspecialty care. *Archives of Internal Medicine*, 153: 2229–2237.
- ²⁴⁷ MacLean CH, Louie R, Leake B et al. (2000) Quality of care in patients with rheumatoid arthritis. *Journal of the American Medical Association*, 284: 984–992.
- ²⁴⁸ Redelmeier DA, Tan SH & Booth GL. (1998) The treatment of unrelated disorders in patients with chronic medical diseases. *New England Journal of Medicine*, 33: 1516–1520.
- ²⁴⁹ K Tu, Y Gong & S Maaten. (2006). Chapter 7- Physician care of patients with congestive heart failure. In Jaakkimainen L, Upshur REG, Schultz SE & Maaten S (Eds). *Primary Health Care in Ontario 2nd Installment ICES Atlas*. Toronto: Institute for Clinical Evaluative Sciences.
- ²⁵⁰ Burl JB, Bonner A & Rao M. (1994) Demonstration of the cost-effectiveness of a nurse practitioner/physician team in long-term care facilities. *HMO Practice*, 8: 157–161.
- ²⁵¹ Twenty nine of the experimental studies were found in: McAlister FA, Stewart S, Ferrua S et al. (2004) Multidisciplinary strategies for the management of heart failure patients at high risk for admission. *Journal of the American College of Cardiology*, 44: 810–819.
- ²⁵² Ahlmen M, Sullivan M & Bjelle A. (1988) Team versus non-team outpatient care in rheumatoid arthritis. *Arthritis and Rheumatism*, 31: 471–479.
- ²⁵³ Banerjee S, Shamash K, MacDonald AJD et al. (1996) Randomised trial of effect of intervention by psychogeriatric team on depression in frail elderly people at home. *British Medical Journal*, 313: 1058–1061; Herinckx HA, Kinney RF, Clarke GN et al. (1997) Assertive community treatment versus usual care in engaging and retaining clients with severe mental illness. *Psychiatric Services*, 48: 1297–1306.
- ²⁵⁴ Bent N, Tennant A, Swift T et al. (2002) Team approach versus ad hoc health services for young people with physical disabilities: a retrospective cohort study. *Lancet*, 360: 1280–1286.
- ²⁵⁵ Chan BTB & Schultz SE. Supply and utilization of general practitioner and family physician services in Ontario. Institute for Clinical Evaluative Sciences. Found at: http://www.ices.on.ca/file/FP-GP_aug08_FINAL.pdf. Accessed: December 21, 2006.
- ²⁵⁶ Schoen C, Osborn R, Huynh PT et al. (2005) Taking the pulse of health care systems: Experiences with health problems in six countries. *Health Affairs*, 10: w5-509-w5-525.
- ²⁵⁷ Schoen C, Osborn R, Huynh PT et al. (2006) On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Affairs*, 11: w555-w571.
- ²⁵⁸ Lee DS, Joahnsen H, Gong Y et al. Regional outcome of heart failure in Canada. *The Canadian Cardiovascular Atlas*, Tu JV, Ghali WA, Pilote L et al. (Eds) (2004) Institute for Clinical Evaluative Sciences. Found at: <http://www.ccoart.ca/AtlasDownload.asp>. Accessed: October 9, 2006.

In contrast, in the Hamilton Health Services Organization's Mental Health and Nutrition Program, mental health counsellors are based with family doctors. The psychiatrists visit the family doctors' practices and can see patients for traditional consultations, but only 15 percent of patients see the psychiatrist directly. For the most part, the psychiatrists spend their time meeting with family doctors, counsellors and other professionals to discuss cases as a group. That ensures more patients get optimal care and doctors get support to handle mental-health problems among their patients. Eleven times as many patients are being seen for mental health problems, but there are 70 percent fewer referrals to psychiatrists. It's an example of the difference well-integrated care and following evidence-based guidelines can make in chronic disease.

5.2.5 Delivery system design

American health systems analyst Dr. Paul Batalden says "Every health system is perfectly designed to get the results it gets."²⁹⁹ Most of the problems Ontario has with chronic disease management can be traced back to poor delivery system design. There are many proven ways to give better care for the chronically ill — there are excellent examples of it here in Ontario, as we've discussed. Even some relatively small changes would make immense difference to patients — things like electronic appointment systems that make sure follow-up care is booked and even keep track of whether care goals are met. Bigger changes, like teams of caregivers working together, will help integrate care so more of the factors that shape patients' health are considered in treatment, which will make it more effective and efficient.

We've described how the London InterCommunity Health Centre's diabetes program looks after patients with a high-functioning team that includes community health workers, who consider non-medical aspects of care. Patients arrange their own visits but electronic systems are in place to ensure that the staff contacts patients who would otherwise be lost to follow-up. The diabetes program is an excellent example of care that's been redesigned for patients.

THE NEED FOR REDESIGN

In contrast, Ontario's family doctors' offices are severely in need of redesign. Compared with doctors in six other countries, Ontario physicians are the least likely to engage in team practice.³⁰⁰ Only 25 percent report the routine use of other professionals to assist with chronic disease management, compared with over 70 percent in the U.K. Managing appointments and follow-up are difficult without electronic systems and Ontario family physicians were the least likely to have them.³⁰¹ Ontario physicians were less likely than those in other provinces or countries to report sending patients reminder notices for routine preventive or follow-up care.³⁰² Ontario family doctors were the most likely to report having problems receiving hospital discharge summaries.³⁰³ None of this adds up to high-performing health care for the chronically ill. Family doctors want to provide good care, but the lack of infrastructure and organizational support has made this difficult in the past. There is hope that new models for primary care such as family health teams (see section 3.1) will solve some of these problems.



²⁹⁹ Dartmouth University Health Care Improvement Leadership Development. Found at: <http://www.dartmouth.edu/~cecs/hcild/hcild.html>. Accessed: December 22, 2006.

³⁰⁰ Schoen C, Osborn R, Huynh PT et al. (2006) On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Affairs*; 11: w555-w571; Croson W, personal communication, December 3, 2006. The authors generously provided access to the Canadian data collected for this study, grouped by province or region, for further statistical analysis as reported here.

³⁰¹ Schoen C, Osborn R, Huynh PT et al. (2006) On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Affairs*; 11: w555-w571.

³⁰² Croson W, personal communication, December 3, 2006.

5.2.6 Effective integration of chronic care model components

The next element of the Group Health Cooperative of Puget Sound's assessment tool for chronic care, which we've been using to guide us through the situation in Ontario, is integration of chronic care model components, including organizational planning for chronic disease programs, guideline-based follow-up of patients, information systems, and linkages to community programs.

INTEGRATION OF CARE IN ONTARIO: THERE'S SOME NOW

One of the original goals of the Sault Ste. Marie Group Health Centre when it was founded in 1963 was better integration of care and more effective community management of chronic diseases.²⁶³

Most of the centre's doctors provide hospital care and work closely with home care. The centre says integrating these three aspects of care reduced congestive heart failure re-admissions by 43 percent.²⁶⁴

INTEGRATION OF CARE IN ONTARIO: THERE WILL BE MORE IN THE FUTURE

Unfortunately, most of Ontario's chronic disease care is not well integrated. There are few links between primary health care practices and community programs.²⁶⁵ One study showed one-sixth of Ontario seniors who had been in hospital were re-admitted to hospital, indicating poor integration of community with hospital care.²⁶⁶

5.2.7 Organization of the health care delivery system

According to the chronic illness care assessment tool, a health system that's organized for the management of chronic disease has effective leadership, strategies and goals for doing that. The financing and operations of the system are designed to support chronic disease management. To find an example of a whole system focused on managing chronic disease, we have to, as we said, look beyond the province and beyond the border, to the publicly funded Veteran's Health Administration in the United States.

Up until the mid-1990s, the Veteran's Health Administration (VHA) system was known for its long waits and questionable quality, typically viewed as a choice only for people who had lost their private insurance. Today the VHA, which serves nearly six million former members of the armed forces, is viewed as the one of the world's best health-care systems.²⁶⁷

²⁶³ Lomas J. First and foremost in community health centres: the centre in Sault Ste. Marie and the CHC alternative. *University of Toronto Press*. Toronto, 1985.

²⁶⁴ Murray D. The Group Health Centre Model – working to improve continuity, comprehensiveness and responsiveness in primary care. Presentation to Research Group on Equity of Access and Organization on Primary Health Care Services. Found at: <http://www.greas.ca/publication/pdf/davidmurray.pdf>. Accessed: November 2, 2006.

²⁶⁵ Glazier RH, Badley FM, Lincker SC, Wilkins AL & Bell MJ. (2005) Getting a Grip on Arthritis: an educational intervention for the diagnosis and treatment of arthritis in primary care. *Journal of Rheumatology*, 32 (1): 137-42.

²⁶⁶ Forster AJ, Clark HD, Menard A et al. (2004) Adverse events among medical patients after discharge from hospital. *Canadian Medical Association Journal*, 170: 345-349.

²⁶⁷ Armstrong B, Levesque O, Perlin JB et al. (2005) Reinventing Veteran's Health Administration: Focus on Primary Care. *Journal of Healthcare Management*, 50(6): 399-408; Arnst C. The best medical care in the US: How Veterans Affairs transformed itself and what it means for the rest of us. *Business Week Online*. Found at: www.businessweek.com/print/magazine/content/06_29/b3993061.htm?chan=gl. Accessed: November 7, 2006; Asch SM, McGlynn EA, Hogan MM et al. (2004) Comparison of quality of care for patients in the Veterans Health Administration and Patients in a National Sample. *Annals of Internal Medicine*, 141: 938-945; Jha AK, Perlin JB, Kizer KW et al. (2003) Effect of the transformation of the Veterans Affairs Health Care System on the Quality of Care. *New England Journal of Medicine*, 348: 2218-27; Ashton CM, Soucek J, Petersen NJ et al. (2003) Hospital use and survival among Veterans Affairs beneficiaries. *New England Journal of Medicine*, 349: 1637-1646.



Leadership was key in the VHA's renewal. In 1994, President Bill Clinton hired Dr. Ken Kizer as undersecretary for the Veterans' Health Administration. He integrated hundreds of separate facilities and community services into 22 regional integrated service networks, and made the patient's perspective the focus of all planning.²⁶⁸ Dr. Kizer and his team developed clear organizational goals, including goals for chronic illness care and primary health care. They knew that better care for chronic illness would require a redesign of clinical and information systems.

The VHA has achieved almost all of Dr. Kizer's vision. Care for patients with chronic diseases is much better than the rest of the U.S. health system and much less expensive.²⁶⁹ The VHA has a fully electronic health record that links all aspects of patient care and can create chronic disease registries by practice or integrated network. It also uses many different techniques for improving quality.

ORGANIZING THE HEALTH SYSTEM FOR HIGH-QUALITY CARE

Ideally, the need for excellent care for chronic disease should be reflected in organizational mission

statements, values, strategic plans, accountability mechanisms and budgets. The Ministry of Health and Long-Term Care issued five draft strategic directions in June 2006 and the fourth, *Improve the quality of health outcomes*,²⁷⁰ includes the statement "The consumer is at the centre of the planning and co-ordination of health services and chronic disease management."²⁷¹ The strategic plan is due out this year.

It's comforting that despite many examples of how we don't deliver good chronic disease care, it is increasingly a goal of health services in Ontario. All 14 of Ontario's local health integration networks have chronic disease as a priority in their health service plans, posted in November 2006. The new family health teams are already supporting chronic disease care and have plans for much more activity.²⁷² Community care access centres play a major role in the care of people with chronic disease and may expand it.²⁷³ A number of community health centres make chronic disease prevention and management for vulnerable populations a priority.²⁷⁴

Long-term care and rehabilitation facilities deal almost exclusively with people with serious chronic illnesses. And despite the television shows, most people in emergency rooms and hospitals are elderly and have common chronic diseases. Some hospitals have developed innovative outpatient programs for chronic diseases, including self-management. The risk, in fact, is that with all these players, Ontario will wind up with an unco-ordinated chronic disease prevention and management system.

Areas that need better co-ordination include incentives and regulations. There are new payments for physicians who fill out diabetes management flow sheets and provide care after hospital discharge.²⁷⁵ Compared with doctors in other provinces, Ontario physicians are much more likely to receive a financial incentive for chronic disease management.²⁷⁶ But despite the

²⁶⁸ Rachlis MM (2005) *Prescription for Excellence*. Harper Collins Canada, Toronto, Page 310.

²⁶⁹ Arnst C. The best medical care in the US: How Veterans Affairs transformed itself and what it means for the rest of us. *Business Week Online*. Found at: www.businessweek.com/print/magazine/content/06_29/b3993061.htm?chan=gl. Accessed: November 7, 2006.

²⁷⁰ Smitherman G. Draft Ministry of Health and Long-Term Care strategic directions, June 29, 2006. Found at: http://www.health.gov.on.ca/english/public/updates/archives/hu_06/hu_lhin_letter_062906.pdf. Accessed: October 29, 2006.

²⁷¹ Guide to chronic disease management and prevention. Ministry of Health and Long-Term Care, September 27, 2005. Found at: http://www.health.gov.on.ca/transformation/tht/guides/tht_chronic_disease.pdf. Accessed: July 26, 2006.

²⁷² Addressing health system navigation challenges in Ontario: A position paper. Ontario Association of Community Care Access Centres, June 2005. Found at: <http://www.oaccac.on.ca/media/System.doc>. Accessed: October 12, 2006.

²⁷³ Association of Ontario Health Centres. Highly effective disease management: How CHCs enhance diabetes care and save public health system resources. Found at: http://www.aohc.org/app/DocRepository/2/Research/CHCs_and_Highly_Effective_Disease_Management.pdf. Accessed: October 27, 2006.

²⁷⁴ Diabetes management incentive, Ministry of Health and Long-Term Care, April 2006; Found at: <http://www.health.gov.on.ca/english/providers/program/ohip/bulletins/4000/bul4439.pdf>. Accessed: November 18, 2006.

²⁷⁵ Schoen C, Osborn R, Huynh PT et al. (2006) On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Affairs*, 11: w555-w571; Croson W, personal communication, December 3, 2006. The authors generously provided access to the Canadian data collected for this study, grouped by province or region, for further statistical analysis as reported here.



development of new models of primary health care, Ontario primary care physicians are mostly paid fees for each service they do, which encourages quick patient turnover and discourages teamwork and working with a patient on self-care.

Ontario also has a mixed record of support for patients managing their illness. Compared to chronic disease patients in other countries, Canadians are unlikely to put off a doctor's visit or a recommended test or treatment because of cost.²⁷⁶ However, they're more likely than people in other countries (except the U.S. and Australia) to report that they pay more than \$1,000 U.S. per year out of pocket for health care. Not all chronic disease services, drugs and supplies are covered by the Ontario Ministry of Health. Last year the Ministry of Health and Long-Term Care announced it will cover a greater portion of costs for persons with diabetes, including being the first province to fund insulin pumps for children.²⁷⁷

The Ontario Drug Benefit Plan offers more generous coverage for seniors than they get in most parts of Canada. The Trillium Drug Plan provides coverage for Ontario residents faced with "catastrophic" drug costs not covered by the Ontario Drug Benefit Plan or private insurance. A family of two with a net income of \$20,000 would pay \$400 a year before being eligible for Trillium coverage while a family of four with a net income of \$60,000 would pay \$2,089.²⁷⁸ On the other hand, use of fitness facilities is often an important component of self-management for chronic diseases, but fees for them and the associated training are not covered in Ontario, whereas some U.S. health plans

such as Group Health Cooperative in Seattle pay for fitness club memberships for some patients with chronic diseases.²⁷⁹

We've discussed the tremendous importance of continuous quality improvement, and noted in section 3.2.1 that many Ontarians do not benefit from continuous improvement of their chronic disease care. Compared with doctors in six other countries, Canadian family doctors were the least likely to have been trained in quality-improvement methods. Only seven percent said they were compensated for engaging in quality-improvement activities compared with 82 percent in the U.K.²⁸⁰

As noted in section 4.3, a high-performing health system must be able to:

- Assess and translate new ideas into practice;
- Measure effective performance;
- Analyze differences in care and what causes them;
- Co-ordinate strategies and messages across disciplines and systems; and
- Continually evaluate the outcome.

Ontario's health system is not there yet.

²⁷⁶ Schoen C, Osborn R, Huynh PT et al. (2005) Taking the pulse of health care systems: Experiences with health problems in six countries. *Health Affairs* 10: w5-509-w5-525.

²⁷⁷ McGuinity Government Improving Health of Young People with Diabetes, Ministry of Health and Long-Term Care, November 14, 2006. Found at: http://www.health.gov.on.ca/english/media/news_releases/archives/nr_06/nov/nr_111406.html. Accessed: November 15, 2006.

²⁷⁸ The patients still have to pay up to \$2 for each prescription. Application guide for Trillium Drug Program, Ontario Government. Found at: [http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/AttachDocsPublish/014-S46850E-87-13/\\$File/trillium_bookE_.pdf](http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/AttachDocsPublish/014-S46850E-87-13/$File/trillium_bookE_.pdf). Accessed November 2, 2006.

²⁷⁹ Hindmarsh M, personal communication, November 1, 2006.

²⁸⁰ Schoen C, Osborn R, Huynh PT et al. (2006) On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Affairs* 11: w555-w571.

5.3 WHAT ARE THE STAKES? THE BUSINESS CASE FOR IMPROVING CHRONIC DISEASE MANAGEMENT AND PREVENTION

As we said earlier, at least 60 percent of Ontario's health-care costs are due to chronic disease. We have noted that better management of chronic disease could lead to better health and fewer deaths. These alone strongly argue for action. But there is also a business case for better chronic disease management.

Preventing diabetes is better than a cure

Nine out of 10 cases of type 2 or adult-onset diabetes (which 90 percent of diabetes cases are) could theoretically be prevented with proper diet and lifestyle.²⁸¹ If we could prevent even some of these cases there would be dramatic savings to the Ontario health system. That's because the six percent of Ontarians with diabetes account for 32 percent of heart attacks, 43 percent of heart-failure cases, 30 percent of strokes, 51 percent of new dialysis cases, and 70 percent of amputations.²⁸² In 2001, it was estimated that diabetes cost the Ontario health system \$2.5 billion, roughly \$5,700 per diabetic per year.²⁸³ Approximately 50,000 new cases of diabetes occur every year in Ontario.

Three studies have recently demonstrated that lifestyle interventions could prevent or delay the onset of

diabetes in high-risk groups.²⁸⁴ If a prevention program based on these trials were launched province-wide, at least one-third of new diabetes cases could be prevented. That would translate into approximately 17,000 fewer new cases of diabetes per year in Ontario. Some \$70 million in health costs would be saved the first year and approximately \$300 million annually by the fifth year of the program.²⁸⁵

Keeping people out of hospital after discharge

As we've noted, many older people, particularly those with chronic diseases are readmitted to hospital within a month of being discharged. However, as noted in section 5.2.6, the Sault Ste. Marie Group Health Centre has reduced its congestive heart failure re-admissions by 43 percent. It did so using nurses as case managers.²⁸⁶ There have been over 30 studies of experimental heart failure care after hospitalization and almost all of them show reduced re-hospitalizations and costs.²⁸⁷ A recent Alberta study of heart failure²⁸⁸ reduced hospital use by an average of 3.6 days per participant, with an estimated net savings of \$2,531. These studies suggest that offering better aftercare to Ontario's heart-failure patients could save between \$53 million and \$100 million per year.²⁸⁹

Similar approaches to post-discharge follow-up with older patients with other chronic diseases also show promise. For example, a Quebec study showed better post-discharge care for patients with chronic obstructive lung disease (conditions like emphysema)

²⁸¹ Hu FB, Manson JE, Stampfer MJ et al. (2001) Diet, lifestyle, and the risk of type 2 diabetes mellitus in women. *New England Journal of Medicine*, 345: 790-797.

²⁸² Hux J, Booth G, Slaughter P et al. Diabetes Practice Atlas. Institute for Clinical Evaluation Sciences. June 2003. Found at: http://www.ices.on.ca/webpage.cfm?site_id=1&org_id=67&morg_id=0&gsec_id=0&item_id=1312&type=atlas. Accessed: October 23, 2006.

²⁸³ O'Reilly D, Hopkins R, Blackhouse G et al. Development of a diabetes economic model (ODEM) and application to a multidisciplinary primary care diabetes management project. Report prepared for the Ministry of Health and Long-Term Care, November 2006.

²⁸⁴ The relative risk reduction was 40 percent over 6 years, 56 percent over 2.8 years, and 36 percent over 7 years: Pan XR, Li GW, Hu YH et al. (1997) Effects of diet and exercise in preventing NIDDM in people with impaired glucose tolerance. The Da Qing IGT and diabetes study. *Diabetes Care*, 20: 537-544; Lindstrom J, Ilanne-Parikka P, Peitonen M et al. (2006) Sustained reduction in the incidence of type 2 diabetes by lifestyle intervention: follow up of the Finnish diabetes prevention study. *Lancet*, 368:1673-1679; Diabetes Prevention Program Research Group. (2002) Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *New England Journal of Medicine*, 346: 393-403.

²⁸⁵ Murray D. The Group Health Centre Model - working to improve continuity, comprehensiveness and responsiveness in primary care. Presentation to the Research Group on Equity of Access and Organization on Primary Health Care Services. Found at: <http://www.greas.ca/publication/pdf/davidmurray.pdf>. Accessed: November 2, 2006.

²⁸⁶ Twenty nine of the experimental studies were found in: McAlister FA, Stewart S, Ferrua S et al. (2004) Multidisciplinary strategies for the management of heart failure patients at high risk for admission. *Journal of the American College of Cardiology*, 44: 810-819; Tsuyuki RT, Fradette M, Johnson JA et al. (2004) A multicenter disease management program for hospitalized patients with heart failure. *Journal of Cardiac Failure*, 10: 473-480; Ducharme A, Doyon O, White M et al. (2005) Impact of care at a multidisciplinary congestive heart failure clinic: a randomized trial. *Canadian Medical Association Journal*, 173: 40-45.

²⁸⁷ Tsuyuki RT, Fradette M, Johnson JA et al. (2004) A multicenter disease management program for hospitalized patients with heart failure. *Journal of Cardiac Failure*, 10: 473-480.

²⁸⁸ 2004/2005 Ontario hospital data - 21,094 admissions CHF Most responsible diagnosis, 23,279 admissions CHF significant co-morbid diagnosis, present on admission. The lower cost estimate applies only to those who had CHF as their most responsible diagnosis but there would also be some impact on the other cases. Total hospital costs for CHF estimated to be \$98million to \$367 million; Helyar C, personal communication. November 21, 2006.

The story of Alice Gaynor provides an example of how the Group Health Centre in Sault Ste. Marie, a publicly funded facility, is helping patients with congestive heart failure effectively manage their chronic disease.

Alice found out she had congestive heart failure more than ten years ago. She knew it was a chronic illness that meant her heart didn't pump well and fluid built up in her lungs, making it hard to breathe and do everyday things. But no one really explained what she should do to stay well and often she had to go to hospital. That's not unusual – many people with chronic illnesses in Ontario do not receive enough information to manage their sickness.

Then Alice moved to Sault Ste. Marie to be near her daughter. At the Group Health Centre there, she was sent to Kathy Palombi, a nurse in a special program for people with congestive heart failure. Kathy's job was to help Alice learn how to take care of herself.

Kathy explained that Alice should limit the fluids she drinks. She helped her learn which foods she shouldn't eat because they're high in salt, and encouraged her to start exercising. Kathy also taught Alice how to decide when she needed extra care.

Alice feels better than she has felt in years and any time she has a problem she can call and Kathy and the doctor can check how she is doing instantly on her computerized health record. The Group Health Centre's heart-failure program works the way health care should work in Ontario – it focuses on what the patient needs, it's there when it's needed and it keeps patients safe and well. It also helps Alice avoid pain and having to go to hospital, and saves the health system money.

reduced re-admissions by 50 percent.²⁸² A recent U.S. study showed that better aftercare for chronically ill people over 80 with other risk factors reduced readmissions by 60 percent and saved approximately \$3,000 in health care costs per participant.²⁸³ If this type of program were applied comprehensively in Ontario there could potentially be hundreds of millions in savings.

Better diabetes treatment can be cost-effective

The Ministry of Health recently completed an evaluation of the Sault Ste. Marie Group Health Centre's diabetes program.²⁸⁴ Even though the program cost money to

develop and run, it improved people's control of their diabetes, which means fewer complications such as heart attack and stroke. The evaluation concluded that the program cost between \$5,000 and \$6,000 to gain what's called a quality-adjusted life year, or QALY. (One quality-adjusted life year is the equivalent one year of life in perfect health, so half a QALY is equivalent to either living six months in perfect health or living a full year in a health state which is judged to be half the quality of life in perfect health). There are a variety of techniques used to make the adjustment.²⁸⁵ Generally programs which cost less than \$20,000 per quality-adjusted life year are considered cost effective.²⁸⁶

²⁸² Bourbeau J, Julien M, Maltais F et al. (2003) Reduction of hospital utilization in patients with chronic obstructive pulmonary disease. *Archives of Internal Medicine*, 163: 585-591.

²⁸³ Naylor MD, Broton D, Campbell R et al. (1999) Comprehensive discharge planning and home follow-up of hospitalized elders. *Journal of the American Medical Association*, 281: 613-620.

²⁸⁴ O'Reilly D, Hopkins R, Blackhouse G et al. Development of a diabetes economic model (ODEM) and application to a multidisciplinary primary care diabetes management project. Report prepared for the Ontario Ministry of Health. November 2006. Found at: <http://www.path-hta.ca/diabetes.pdf>. Accessed: November 25, 2006.

²⁸⁵ For more on QALY's and economic evaluation, see: How to use an Article on Economic Analysis of Clinical Practice. Found at: <http://www.cche.net/text/usersguides/economic.asp>. Accessed: November 24, 2006.

²⁸⁶ Laupacis A, Feeny D, Detsky AS et al. (1992) How attractive does a new technology have to be to warrant adoption and utilization? Tentative guidelines for using clinical and economic evaluations. *Canadian Medical Association Journal*, 146: 473-81; A recent review of the Ministry of Health and Long-Term Care's Health Technology Advisory Committee noted that elective endovascular repair of aortic aneurysms would be cost-effective compared with open surgical repair if its cost per QALY were \$22,528. See Bowen J, de Rose G, Hopkins R et al. Systematic review and cost-effectiveness of elective endovascular repair compared to open surgical repair of abdominal aortic aneurysms. *Interim report*, July 2005. Found at: <http://www.path-hta.ca/EVAR%20Interim%20Report%20Jul%202005.pdf>. Accessed: November 26, 2006.

The London InterCommunity Health Centre's diabetes self-management clinic also has achieved major improvements in diabetes control.⁷⁰ Because of their efficient interdisciplinary care model, their average cost is only \$18 per month per participant (excluding medication, lab and program-development costs)⁷¹ so it's also very cost effective.

5.4 CONCLUSIONS

The Ontario health system is an illustration of how "systems are perfectly designed to get the results they get." It was designed and funded to deal with acute illnesses, but chronic disease is today's greatest health-care challenge. We need to transform Ontario's health services to make the system high-performing in chronic disease care.

Ontario has some examples of excellence in managing chronic disease, but most Ontario patients with chronic illnesses do not get the kind of care they should — they aren't encouraged to manage their own care, aren't given written management plans and the lack of electronic records means care is not systematically organized and managed in a way that ensures the best possible results. Care for chronic disease lacks planning and co-ordination.

There are some positive signs that care for chronic disease will be strengthened. The Ministry of Health and Long-Term Care's strategic plan is to include chronic disease and all 14 local health integration networks have included chronic disease in their services plans. Finally, Ontario's move to interdisciplinary models of primary health care should mean chronically ill patients receive broad, well-integrated care from their primary providers.

We at the Ontario Health Quality Council are concerned, however, that there are a number of policy developments for chronic disease prevention and management in different branches of the ministry, including the population health branch, the primary health care branch, and the Wait Time Strategy. There is a risk that these strategies will not be co-ordinated. That could leave it unclear who is responsible for developing and delivering effective chronic disease care — with the risk that some parts of what should be a whole will fall between the cracks.

Effective chronic disease management will require much work, from new ways of thinking to new investments. It is likely that in the long run, there will be cost savings. But the most important reason for any change must be to reduce the unnecessary suffering of Ontarians.



⁷⁰ The program estimates an approximately two percent absolute decline or 22 percent relative reduction in HbA1C levels after program intervention (from 8.9 percent to 6.95 percent); Harvey B. The diabetes epidemic from a CHC perspective. Presentation to the annual meeting of the Association of Ontario Health Centres, June 5, 2006.

⁷¹ Harvey B. Presentation to the annual meeting of the Association of Ontario Health Centres. The diabetes epidemic from a CHC perspective, June 5, 2006; Harvey B, personal communication, November 27, 2006.

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The Ontario Health Quality Council is mandated under Ontario's Commitment to the Future of Medicare Act to inform Ontarians on the status of our publicly funded health system, including access to health services, health human resources, the health of Ontario's population, and health-system outcomes. The Ontario Health Quality Council also supports continuous quality improvement in the health system.

In support of its work, the council has two committees:

- Communications Committee: recommends to council a communication strategy and plan to ensure the council's report is relevant and understandable, and receives the attention of as many Ontarians as possible.
- Operations and Audit Committee: reviews and makes recommendations to council regarding its finances, audit arrangements, human resource plans and policies, and information technology.

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